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ANNUAL SPECIAL ISSUE

JUNE 26, 1920





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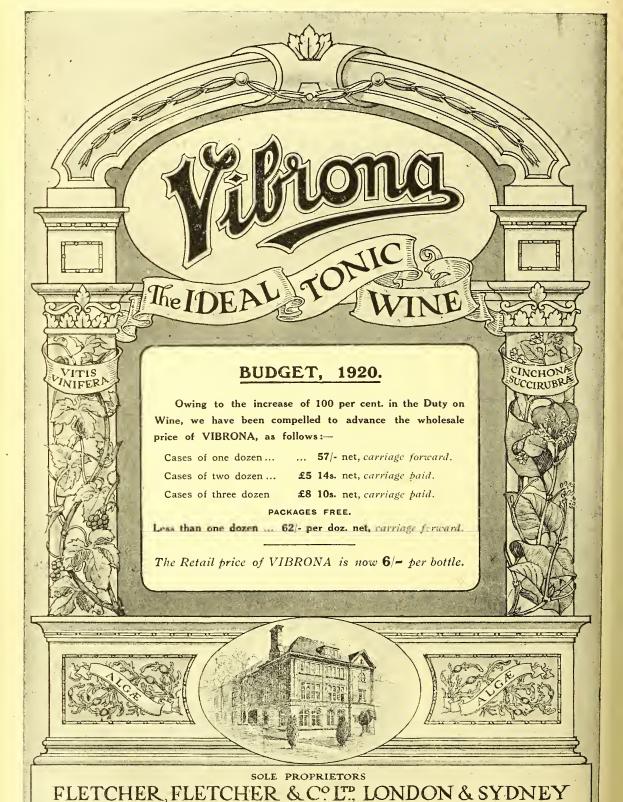
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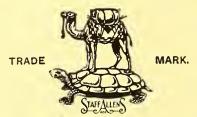
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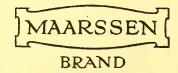
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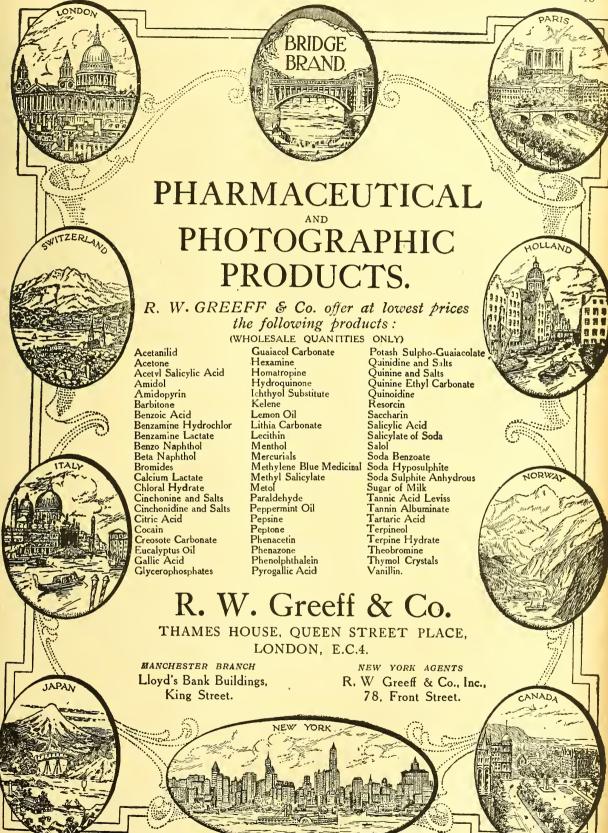
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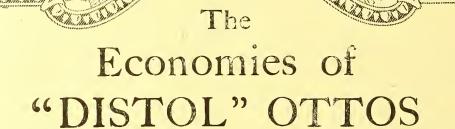
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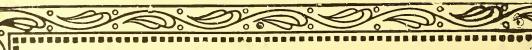
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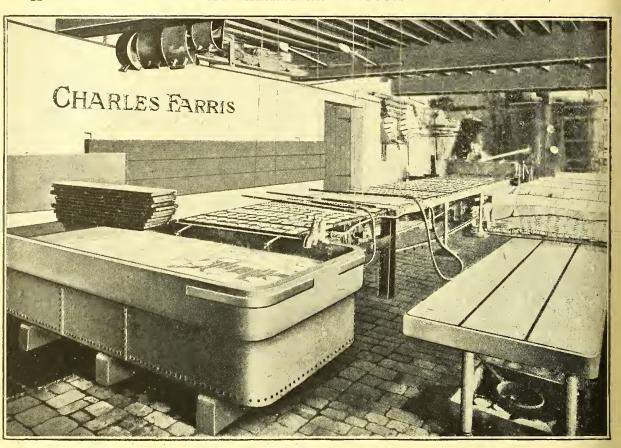
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Telegrams: "Barthgay Paris." Offices: 40 Rue Damremont, PARIS. Telephone: Marcadet 15/92. Distilleries and Laboratories; Chateauneuf-Val-St.-Donat (nr. Grasse), and Romans (Drôme).

SPECIALITIES: Menthes, Neroli, Petitgrain, Patchouli, Otto of Rose, Violet Essence, Gant de Saxe.

"ESSENCES DE MONTAGNE" and Imported Products. Lavender, Aspic, Thyme, Giroflé, Badiane, Geranium, Ylang Ylang, Musk, Ambre.

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Essential Oils, Chemicals and Drugs. NEW YORK Cables-" MAGLAUR."

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Loritol (Muguet), Ionone (Violette), Geraniol, Citronellol, Rhodinol, Chirassol, Phenylethyl, Alcool, etc.

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THE OILS THAT HAVE A LONG REPUTATION FOR QUALITY.

In the manufacture of our Terpeneless Oils it was imperative that we secured the very finest Sicilian Oils to work upon. After several exhaustive tests we came to the conclusion that "SPINELLI" brand of Sicilian Oils gave us the best results. As we were able to place large orders for our own needs with the manufacturers, we have pleasure' in stating that they have entrusted us with their British Agency, and we offer to users of Sicilian Oils the benefit of our experience. There is quality in every package. Guaranteed Genuine Oils of authentic origin, and to conform to any analysis as to purity.

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We manufacture exclusively ourselves all kinds of Terpeneless Oils, and invite inquiries from users throughout the World.

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PURE ENGLISH OIL OF PEPPERMINT

Grown on my own farms.

£1000

to Charity

I will give £1000 to any Charity named by any person who can prove my Peppermint Oil to contain any adulterant or foreign Oil.

Inspection of Farms & Distilleries cordially invited.

Seymour's Distillery & Herb Farm, Holbeach, Lines.

INSECT FLOWERS

(Japanese Best Quality).

1919 Crop was only 50 % of that of 1918, and present prices are 400 % higher than 1918. 1920 crop to be harvested May-June is estimated 20 % below that of 1919. If demand continues as at present, the present unprecedently high price will be exceeded.

We have shipped hundreds of tons with unanimous satisfaction to our customers.

Cable us your inquiries.

We are an all British - American firm, specialising in business that ensures satisfaction.

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OIL OF HOP.

Singly and fractionally distilled.
HIGHEST CONCENTRATION AND PURITY GUARANTEED.

Prices, samples and information from the distillers:

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Let us quote you for any of the following:

POWDER PUFFS TOOTH BRUSHES NAIL BRUSHES BATHING CAPS SPONGE BAGS ORANGE STICKS HAIR BRUSHES
SHAVING BRUSHES
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ESTABLISHED 1768.

The PIONEERS in Perfumery Products.

THE ETABLISSEMENTS ANTOINE CHIRIS

well-known all over the world, are now in LONDON, trading direct with the consumers.

Natural Flower Oils. **Essential Oils** Synthetic Chemicals. Sicily Oils,



Olive Oil, Vanilla Beans. Musk. Ambergris, Civet.

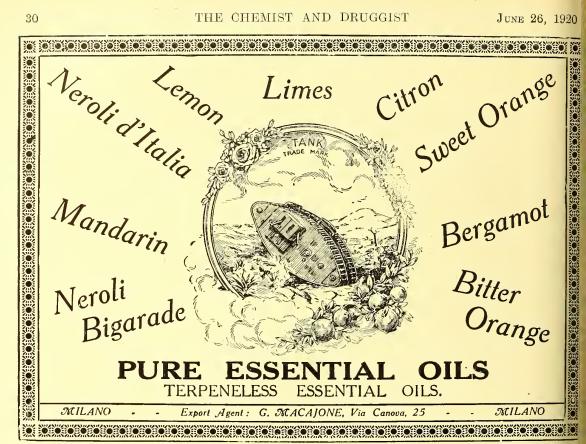
Imported Goods from India, Australia China, Japan, etc.

Inquiries solicited by their British Branch-

ANTOINE CHIRIS, LTD., 3 Drapers' Gardens Throgmorton Avenue, LONDON, E.C.2

Stock carries in England.

The policy of the House of Chiris is to manufacture every product it offers. Where this is impossible, branches have been established in the various producing centres throughout the world to facilitate the collection of such products—thus enabling us to ensure to our customers that all goods sold under our label and seal are guaranteed pure and of the finest quality.



"ARETHUSA"

ESSENTIAL

LEMON, ORANGE (Sweet & Bitter) BERGAMOT MANDARIN

Guaranteed absolutely pure

The Brand that covers only Finest Quality Oils.

> Manufactured by the old-established house of FRATELLI JUNG (Est. 1867) Palermo, Messina, Catania.

ASK YOUR USUAL SUPPLIERS

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MATERIALS for MANUFACTURING

PERFUMERS. CONFECTIONERS.

SYNTHETICS ARTIFICIAL VIOLETS (MYRIONE)

Artificial

INQUIRIES SOLICITED. LARGE STOCKS

RESTUCCIA'S Pure Sicilian Oils

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Finest quality with a world-wide reputation.

The CITRUS BRAND & MANUFACTORY

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Give us Back the word

So that we may express it without a blush.

Imagine living for long on necessities only. Bread to eat, water to drink, old clothes wear — far better dead.

Luxuries are sometimes even necessities. Can the average man rest long without a smoke-or a lady without her powder and perfume-especially should her favourite be the delightful—

ROSINE OR DE LUZY.

STOCK THEM AND TEMPT CUSTOM.

CHARACTER

increase Chemists' profits beyond imagination. We believe in facts and give a few below.

- (a) LONDON DEPARTMENT STORE. months' trade 20 transactions. Total cost £280. Profit resulting £140.
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N.B. ROSINE & DE LUZY LINES COMMAND CONSTANT REPEAT BUSINESS.

LEADING ROSINE LINES-

... 28/6 less 33\frac{1}{3} % Pierrot Perfume... 28/6 less 33\frac{1}{3}\%

Nuit de Chine

less 33\frac{1}{3}\% .. 33/6 Coupe d'Or ...

less 333% .. 42/-Aladin ... less 333%

Showcards and Test Samples free,

all we claim.

HOME Orders accepted on condition that goods TRADE may be returned for credit if not considered

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LEADING LINES

10d., 1/9, 3/3 less 33¹/₃%

1/3, 2/6, 3/9 less 33¹/₃% Creme 5/6 & 14/6 Parfum

(Flowers) less 331% Parfum,

Ambre, Chypre, Origan. 5/6 & 16/6

Showcards & Samples free. less 33\frac{1}{3}\%

EXPORT Orders to any stated value shipped in bond, **OFFER** cash against documents or through London Shipping Houses.

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HANSA PLATZ

The Original of



World-wide Repute.

Gold Medals: Paris 1900; Rome, Bremen, Lübeck and Dresden.

The PUBLIC DEMAND it

in spite of crushing excise imposts. None so refreshing—none so invigorating.

There is no risk in stocking "HANSA" COLOGNE

Extensively Advertised. Commands Ready Sale. Shows Excellent Returns.

From all wholesale houses or direct from

F. SCHUTZE & CO., LTD.

Black Bull Works, CALEDONIAN MARKET, LONDON, N.7.



(MITCHAM ROAD) LTD.

WEST CROYDON, SURREY.

SEVEN FARMS and THREE DISTILLERIES in SURREY.

Gold Medal

Paris
Universal
Exhibition,
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FRANCO-BRITISH EXHIBITION, LONDON, 1908

Grand Prize.

The Highest Awards for the production of

PEPPERMINT, LAVENDER and CAMOMILE.

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POTTER ® MOORE'S

Finest Old English Mitcham

LAVENDER WATER

Established 1749.



Lavender Water.

| (Protected P.A.T.A. Prices) | | | | | | | | |
|-----------------------------|---------|-------|--------|-----|--|--|--|--|
| Size | Whol | esale | Retail | | | | | |
| No. 42 | 13/- | doz. | 1/6 | ea. | | | | |
| No. 43 | 21/6 | ,, | 2/6 | ,, | | | | |
| No. 44 | 39/- | ,, | 4/6 | ,, | | | | |
| No. 45 | 74/- | | 8/6 | ,, | | | | |
| No. 46 | 120/6 | | 14/6 | ,, | | | | |
| 1 Pint | 120/6 | ,, | 14/6 | 11 | | | | |
| ½ Pint | 16/- | each | 24/- | ٠, | | | | |
| 1 Pint | 30/- | ,, | 45/- | ,, | | | | |
| Flasks | 36/- | doz. | 4/3 | 11 | | | | |
| ., sma | II 15/- | | 1/9 | • | | | | |

Frozen Lavender Water.

(Protected P.A.T.A. Price) Wholesole 3/6 each 28/- doz.

Lavender Water in Wickered Bottles.

(Protected P.A.T.A. Prices)

(Protected P.A.T.A. Prices)

Retail 29/- doz. 3/6 each l oz. 46/-

Lavender Bath Salts.

| Size | Size Wholesale | |
|-------|----------------|---------|
| No. 1 | 24/- doz. | 3/- ea |
| No. 2 | 42/- ,, | 5/ |
| No. 3 | 84/- ,, | 10/- ,, |
| No. 4 | 108/ | 13/ |

Lavender

Smelling Salts.

Wholesale Re
7/6 doz. 1/-Retail 1/- each Flat Round 13/- "

Lavender Sachets

Large Size 72/- per gross Small Size 36/- ,,

Proprietors: W. J. BUSH @ CO., LIMITED,

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Lavender Distillery, Mitcham - Surrey. Think it over!

THESE ARE JUST THE LINES YOU WANT.

"Leona" Series are of tip-top quality, beautifully packed, well advertised, leave you a good profit, and are on the P.A.T.A.



"LEONA" DENTAL CREAM

(Mint or Thymol)

Small Size ... Cost 4/6 per dozen Sell @ 7½d.

Large Size ... 8/- ... @ 1/3

Recommended by the Institute of Hygiene.

"LEONA" CREME DE BEAUTE

Cost 12/- per dozen Sell @ 1/6

A Delightfully Perfumed Vanishing Cream packed in handsome 2-oz. opal pots.

"LEONA" BRILLIANTINE (SOLIDIFIED)

Cost 8/6 per dozen Sell @ 1/-

Packed in beautifully embossed tins and cartons.

POUDRE "LEONA"

Cost 8/- per dozen , Sell @ 1/-

Richly perfumed and packed in gold-blocked boxes.

Every Line is a work of art.

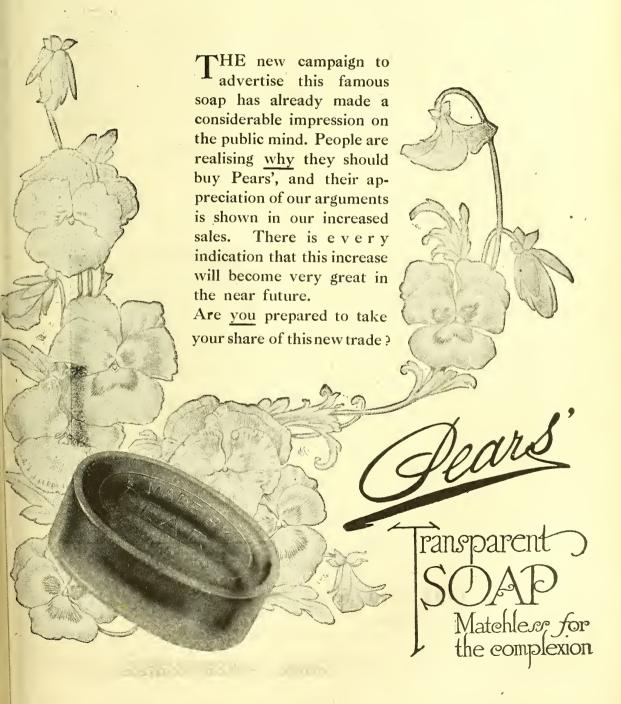
Ask your wholesaler to show them to you, and

YOU WON'T REGRET IT

Sole Manufacturers and Proprietors-

THE JACKSON CO., 172 St. JOHN STREET, LONDON. E.C. 1.

Jears' new advertising campaign is now in full swing.



ANALAX

(Reg. Pat. No. 310716)

The Ideal Fruity Laxative in Pastille Form.

> **DELICIOUS** RELIABLE EFFECTIVE



STEADY **PROFITABLE SELLER**

FROZOCLONE

The ORIGINAL Solid Eau de Cologne.

THE WORLD'S GREAT PERFUME AND REFRESHER IN SOLID FORM.

Retails (P.A T.A.) minimum - 3/6 Giving at least 10d. Profit

on each sale.

32/- per doz.

Special terms for Bonded Shipments of 4 gross minimum. The ORIGINAL Solid

Eau de Cologne is FROZOCLONE

FROZOCLONE is a convenient form of the finest Eau de Cologne, refreshing when rubbed on the forehead, equally pleasant as a smelling-bottle, invaluable in a heated atmosphere and when motoring.

CARNATE

A NAIL POLISH

with new and distinctive features. Antiseptic — Softens the Cuticle brilliant and lasting polish



P.A T.A. Minimum 1/9. 15/- per dozen.

"DEMUTH'S SOLID ENGLISH LAVENDER"

Similar size and packing as "FROZOCLONE" in blue glass bottles with silvered caps. Retails (P.A.T.A.) minimum 3/6, 32/- per dozen. Special terms for Bonded Shipments of 4 gross minimum.

Sound Specialities carrying a good Profit. Full Particulars & Advertising Literature on request

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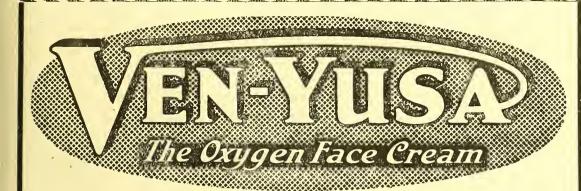
EAU de COLOGNE

DEMUTH'S Laboratories

68 Salusbury Road, & Montrose Avenue, LONDON, N.W. 6.

Telephone: Willesden 525.

Telegraphic Address: Boulbene, Kilb, London."



RETAIL PRICE 1 6 Per Pot

FOR a long time the public have been charged only one shilling for Ven-Yusa Cream. It has been a good advertisement and many new customers have been made. The public have had the advantage and we have had the advertisement. Now, however, the rising costs necessitate an advance in price to the real value of Ven-Yusa.

Ven-Yusa is a HIGH-QUALITY CREAM made of the highest grade materials and perfumes. At 1/6 it is much better value than many 2/- or 2/6 lines. A strong and attractive advertising campaign is in force.

Lastly—and the most important to you—

Your Profit is Increased

The Price is 12/- per doz. = $33\frac{1}{3}\%$ on TURNOVER, plus Window Show terms 5% (£3 assorted orders).

ALSO ORDER

Retail Price

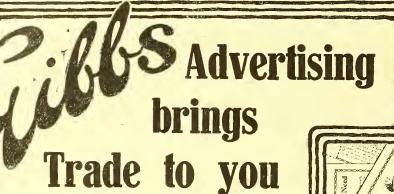
Ven-Yusa Soap, 8d. per tab., 6/-per doz.

"Shampoo, 3d. "pkt., 22/-per gross
", 1/6 size, 13/-per doz.

C. E. FULFORD, Ltd.

CARLTON HILL, LEEDS & 16 D'Olier Street,

DUBLIN.



OUR Pharmacy is the market, the ultimate place where people influenced by Gibbs publicity buy the goods.

Gibbs advertisements are consistently appearing in the National Press, the Local Newspapers and Magazines, and, in addition, Gibbs are conducting a spirited appeal on educational lines addressed to schools (both children and their teachers) which is having a far-reaching effect. Other propaganda is of interest to the Dental Profession.

Because of this wide spread and forcible publicity and because Gibbs goods are right, the demand is steadily increasing. Are your stocks sufficient to meet this demand for Gibbs Dentifrice, Gibbs Cold Cream Soap, Gibbs Shaving Soap and the other Toilet Preparations bearing the Gibbs name? Don't disappoint your customers. Order now and benefit by the sales that must ensue. Our trade terms are generous -- your turnover

D. & W. GIBBS LTD.

(Dept. S 7)
Cold Cream Soap Works, London, E. 1.

Gibbs July Announcements will appear in the following influential media: Scientific Press. British Dental Journal
Dental Practitioner
Dental Surgeon

Dental Science

National Press.

National Fress.

Daily Mail Tatler (in colours)

Daily Chronicle
Daily Miror (in colours)

Daily Sketch
Evening News
Graphic (2 colours)

Passing Show

Passing Show John Bull Daily Mail Fashions

Provincial Press. Newcastle Evening Chronicle
Manchester Evening Chronicle
Yorkshire Evening Post
Yorkshire Telegraph and Star
Cardiff Evening Express
Glasgow Evening Times
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Appealing to upwards of TEN MILLION READERS throughout the United Kingdom. LONDON

ONE PENNY

Chemist.

How we help to create the demand for you to supply.

REPRODUCTION OF A PAGE ADVT, IN THE "DAILY MAIL."

THURSDAY, JUNE 10, 1920. Fortune s Favours.

Celebrate with us to-day our 208th Birthday

The Souvenir Gift Case contains

OLLO Brond was in the

· generous sample of each of the following famous

GIBBS TOILET PREPARATIONS Gibbs DENTIFRICE

Cibbs DENTAL CREAM

Golds Cold Cream SHAVING SOAP

Gibbs COLD CREAM SOAP to skin amollient and soap of lagrance and shaim. A ped agrance and shaim. A ped good complexion, ideal for here to nothing lines in poeur fold Casam Soap—the issuit involved years soap—making Frece 7d. per tobled, hop of the

Gibbs COLD CREAM FOAM

FREE BROCHURE

THE House of Gibbs is 208 years old to-day and in celebration of an occasion so unique s distributing gifts to its patrons. These gifts consist of cases containing generous miniature packages of Gibbs celebrated Toiler Preparations.

To you who use

GIBBS DENTAL CREAM

GIBBS SHAVING SOAP GIBBS DENTAL CREAM GIBBS SHAVING BOAP
GIBBS COLD CREAM SOAP
GIBBS TALCUM POWDER
GIBBS TALCUM POWDERS
GIBBS COLD CREAM FOAM
GIBBS SHAMPOO POWDERS
GIBBS "EURA" MEDICATED SOAP

Here is a Gift for You

Cut out this Coupon and attach wrappings from any three of the above articles and we will send you the Souverur Gift Case as shown in left column. If your application is amongst the first thousand opened we will also send you the handsome photograyure as shown on the right. SEND NO MONEY OR STAMPS.

If you are not already a user become one to-day and demand your Gift from us.

Ask your Chemist for Gibbs Toilet Preparations. D & W GIBBS, Ltd., Souvenir Dept. I. Cold Creem Sosp Works, London, E. 1.

SI BITTI KANDATU KANDATU KANDATUK DARATUK DAN KANDATUK DAN KANDATUK DAN KANDATUK DAN KANDATUK DAN KANDATUK DAN

SASSE CONTRACTOR SASSE Thousand Further Gifts

F your letter contains three wrappings as mentioned and is among the first Thousand Applications opened we will send a beautiful photogravure, in sepia, of M. E. Raphael's famous painting "A Naiad." We have reserved 1,000 copies for readers of this paper as a permanent souvenir of our 208th birthday



The picture (which is entirely free from advertisement) measures 20 nns by 144 inv and is plate-susk on fine art paper measuring 30 ins. by 214 ins. act are acady for framing. This gens of art will be welcome in any beauty-loving home and could not be purchased for less than half-a-guinea.

No letter will be opened until Monday, June 14th, so all have an equal chance.

Free Souvenir Coupon

To Messrs. D. & W. GIBBS, Lta.,

Ucolloure, I sooken barewith Wrappings from three of year Tollys I Preparations, and shall be gind to receive free of all charge the Scotteria fill Charge when an arrested for your 20th Apole-transy, each of more rows of the free 1.00 captions appeal, and the second of more rows of the first 1.00 captions appeal, and the second of the s

Post this Coupon NOW

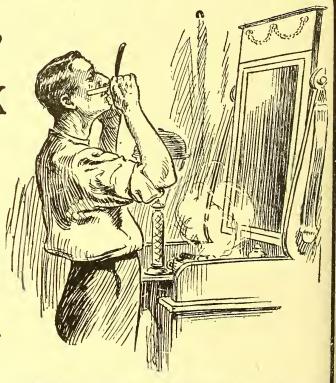
THE

"ERASMIC" SHAVING STICK

Should be one of your leading lines. Can be recommended as the finest stick on the market. Now being advertised in the Leading Papers.

> PROFITS GOOD AND PRICES PROTECTED.

"ERASMIC" Perfumers WARRINGTON.



DODGE & OLCOTT CO., LONDON, E.C. 3. 20 MARK LANE,



THE "D & O" BRAND

is the "Standard of Quality" for

OILS of BAY, CEDARWOOD, PATCHOULI, PEPPERMINT, SASSAFRAS, ETC.

BALSAMS of Copaiba, Peru, Tolu, TONKA BEANS, Angosturas.

Telegrams--"EGDARF, FEN, LONDON."

CITY 2468.

Established ROURE BERTRAND FILS, GRASSE.

LAVENDER (French), SPIKE LAVENDER (French and Spanish)

NEROLI, GERANIUM (African and Bourbon), SANDALWOOD, PETITGRAIN (French and American), VETIVER (Java and Reunion), ROSEMARY, BOIS DE ROSE FEMELLE, YLANG, &c.

ORRIS CONCRETE and LIQUID.

ESSENCES, SOLIDES and LIQUIDS from flowers.

We have Stocks in London of the most important Essential Oils and Perfumery Products.

JUSTIN DUPONT, Argenteuil (S. & O.), France Makers of SYNTHETIC PERFUMES

and some of the finest original odours extant, for Sachets, &c.

SOLE AGENTS FOR THE UNITED KINGDOM:

STEPHENS BROTHERS & CO., 2, 5 & 6 Bury Court, St. Mary Axe, London, E.C. 3.

Wholesale Houses only supplied.

PAPIER POUDRÉ

TRADE

British Made & Goods.

Beware of

Spurious Imitations

"LEHCARESOR."



Note our Trade Marks.





APIER POUDRE, LTD..

20 Baker St., Portman Sq., London, W.I.
and in Paris.

WHITE, ROSE, or RACHEL Tints, 4d., 6d., 8d. and 1/4 sizes Booklets, 2/8, 3/9, 5/-, and 10/- per dozen net respectively.

SUNBURN TINT, 8d. & 1/4 sizes only, 5/- & 10/- per doz. net.

REFILLS to Mirror Cases in White or Rachel 2/8 per doz. net. 8d. SHAVING PADS, for Use after Shaving (unscented), white only, 5/- per doz. net.

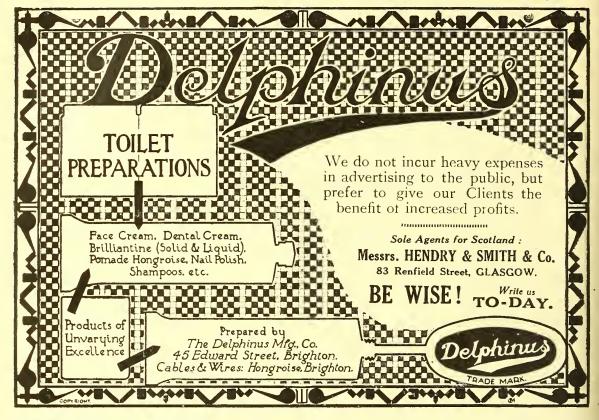
POPPŒA ROUGE

A most popular line.

(Regd.)

Made in booklet form. One size only, viz. 1/- at 8/- per dozen net. Mirror Cases 1/4 at 10/- per doz. Refills for same 6d. at 3/9 per doz. net.

PAPIER POUDRÉ, Ltd., 20 BAKER STREET, LONDON, W.1





THE FRAM MNFG. CO., LTD.,

Excelsior Works, Ellis Street, BIRMINGHAM, ENGLAND.

Manufacturers of every toilet article for Shaving purposes. The "FRAM" finest hollow-ground Razors, Razor Strops, Shaving Brushes, Brilliantines, and other Hair preparations, Pomade Hongroise, Tooth Pastes, etc.

Supplied boxed in dozens, hinged lid-boxes, displaying handsomely coloured litho, showcard when open. An attractive, rapid-selling Counter Adjunct.

FACE CREAM. TOOTH POWDER. NAIL POLISH POWDER. PASTE. HAIR CREAM BRILLIANTINE, Solid and Liquid. PERFUMES VIOLET POWDER. TALCUM. TOILET OATMEAL. SHAMPOO POWDER & LIQUID. MASSAGE CREAM

Your own formula prepared, or we can supply ingredients if desired.

Send for samples and quotations.

A. CONNELL & CO., 3 Jewry Street, LONDON, E.C.3.

•

VASELINE MARK HAIR TONIC

is to be advertised extensively during

JUNE and JULY

in Weekly and Monthly publications having

MORE THAN 12,000,000 READERS

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Size No. 1, 15/- doz. Retail, 1/9

(Showing a Profit of 40%)

Size No. 2, 26/6 doz. Retail, 3/(Showing a Profit of 35%)



Chesebrough Manufacturing Co.
42 HOLBORN VIADUCT
E.C. 1



ANTISEPTIC ABSORBENT

POWDER

THIS WORD 'ZITA' stands for ZINC OLEATE

NFUSORIAL EARTHS

ALCUM

A CID BORICUM ANTISEPT

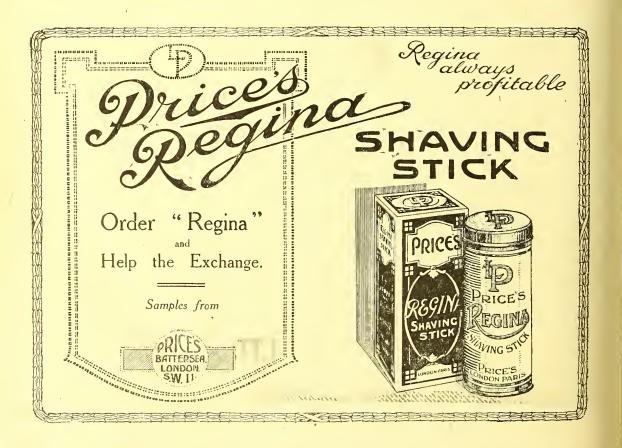
This Powder brings Reputation
Rapid Sales &
Rapturous delight
to its users.

Distinct from any other Baby Dusting Powder.

An Ornament to any Chemist's Counter.

for terms apply to

ANGLO-AMERICAN PHARMACEUTICAL COMPANY LTD. Galen Works, 59, Dingwall Road, EAST CROYDON, (LONDON.)



YAN BARAN BARA

TOOGOOD'S

PACKED TOILET **PREPARATIONS**















3507





3403

Customer's Name Free on 3 dozen of a kind, assorted sizes.

Illustrated Price List sent on application.



2482

Manufactured by

Southwark Street, LONDON, S.E. 1. "Toogood, Boroh, London."

MACLEAN'S PERFECT PRODUCTS IN PERFECT TUBES.

EMULSIFIED COCOA NUT OIL.

We are selling an exquisite preparation in colour enamel tubes nicely cartoned

Fixed Minimum RETAIL 1/3
WHOLESALE—

1 doz. Carriage paid for 8/3 3 doz. , , , , 23/3 SHOWCARD WITH EACH ORDER.

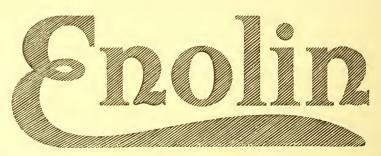
THE MIDGE PEST

Will be greater than ever this year, because of the exceptionally mild winter.

SPECIAL SAMPLE OFFER

3 doz. Midge Cream—a very dainty cream in colour enamel tubes on sales cards by return of post for 16/6 Carr. Paid.

MACLEAN'S, Ltd., 6 Spring St., LONDON, W.2.



TOOTH PASTE

"Strong" or "Mild"

THE SUPER PASTE

"Enolin" is also supplied in Powder Form - 6d. & 1s. Tins

Selling Agents for Provinces, Ireland and Export—

Messrs. PATTINSON & MACKIE, LTD.

Albion House, 59 New Oxford Street,

London, W.C. 1.

Sole Manufacturers and Proprietors-

A. & E. CARRERAS, LTD., Perfumers,

207 King Street, Hammersmith, London, W. 6. TRY THIS BONUS OFFER TO-DAY. TRY THIS BONUS OFFER TO-DAY. 1 Doz. for Cheque 10/6 with $1 \times 1/6$ Box "Lustressa" Henna Shampoo Powders as Bonus. 3 Doz. for Cheque 30/2 with $4 \times 1/6$ Boxes "Lustressa" Henna Shampoo Powders as Bonus. Above Bonus offers Post Free. C. A. STOKES & CO. LTD. Desk 14, Eclipsol Works. BRISTOL.

MACLEAN'S PERFECT PRODUCTS IN PERFECT TUBES.

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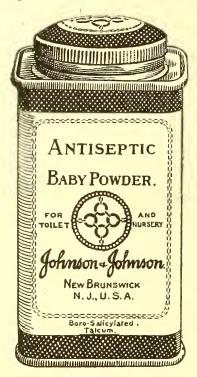
Sole Manufacturers and Proprietors-

A. & E. CARRERAS, LTD., Perfumers,

207 King Street, Hammersmith, London, W. 6.



SOLD THE WORLD OVER.



Antiseptic TOILET & BABY POWDER

JOHNSON & JOHNSON British - Manufacture.

Made from the Best Talcums and Delicately Perfumed.

Bonus given for order of 2 gross and window display.

For particulars apply to-

JOHN TIMPSON & Co., Ltd. 104 Golden Lane - E.C. 1.

MOUSLEY'S "BEAVERPUF"

Patent Nos. 4931 and 4932.

The Ladies' Natty Friend.

B. quality
Brown
Fur,
3/11
each.

Retail.



G. quality
Grey Fur,
4/6
each,
Retail.

Additional Powder Bags, 6d. each, Retail.

Revolution in Powder Puff Manufacture.

Thousands already sold.

Now stocked by leading Wholesale Houses.
Usual Trade Discounts.

Patentee and Sole Manufacturer:

F. A. MOUSLEY, Priest Bridge, Mortlake, London, S.W.14.

SALES ALWAYS INCREASING.

INDIAN PERFUME BRICK

KEEPS AWAY MOTH. LASTING & FRAGRANT.



FOR LINEN CUPBOARD AND WARDROBE.

On the P.A.T.A. Retail Price 6d.

WANDA TOILET PUMMICE. WANDA NAIL POLISH. WANDA ONE-DROP PERFUME.

Of the Makers:

WILLIS, LOW & DRUIFF, LTD., 33 Percy St., London, W.1.

AND ALL WHOLESALERS.



Manufactured under Hygienic Conditions.

EUCRYL TOOTH PASTE

EVERY Chemist realises the importance of selling only goods—especially Dentifrices—manufactured under hygienic conditions.

The modern Dentist recommends his Patients to buy only such Dentifrices as he knows to be scientifically sound.

EUCRYL TOOTH PASTE is made from best possible ingredients procurable, and is manufactured under such up-to-date and hygienic conditions that the raw materials are untouched by hand from start to finish.

The Chemist and Dentist alike are well aware of its antiseptic and germicidal qualities, and its constant use guards against all diseases of the teeth.

Always be well stocked with EUCRYL, the big profit line, which brings constant repeat orders.

Send to-day for particulars of our window and counter bonus scheme.

EUCRYL, Ltd., 138 Borough High Street, LONDON, S.E. 1.

Telegrams: "Eucryl, Sedist, London."

Telephone: Hop 2268.

A. BOURJOIS & Cie, Ltd. 66 CARTER LANE LONDON, E.C. 4.

Please note that the prices of

Poudre de Riz de Java (Bourjois)

are as under:

2/- size. No. 45 1/3 size. No. 495 - 16/- per doz. 1 doz. - 11/- per doz. doz. 15/9 10/9 6 6 12 15/6

The P.A.T.A. prices for Java Powder have been increased to 2/- and 1/3 per box. May 1, 1920.



A. H. RISE

BAY RUM

The genuine West Indian Bay
Rum. The most delicate tonic
for the hair, the skin, the bath.

Prompt delivery from the
free harbour at Copenhagen,
Denmark.

In casks of about 180 litres.

Apply to—

AUGUST FABER & CO.
60 Mark Lane, London, E.C.3.

A. H. RIISE
6 Engtoftevej, Copenhagen. A. H. RIISE'S

ST. THOMAS NEW YORK COPENHAGEN

BAY RUM

The genuine West Indian Bay
Rum. The most delicate tonic
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Prompt delivery from the
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Denmark.

In casks of about 180 litres.

Apply to—

AUGUST FABER & CO.
60 Mark Lane, London, E.C.3.

A. H. RIISE
6 Engtoftevej, Copenhagen.

IVE it a good show and it sells itself. There is nothing just like it. The excellence of the product and the practicability of the box make customers for you.

Shows you $33\frac{1}{3}\%$ on selling price.

POUDRE NILDÉ

in the Sifter Box.

Appeals irresistibly to every woman. The quickest selling line of face powder ever shown.

MINIMUM SELLING PRICES:

POUDRE NILDÉ

in the Sifter Box.

Handbag size - - 1/ Medium size - - - 2/ Large size - - - 3/6 Leather or fancy silk vanity cases, with mirror, small size - - - 5/ Large size - - - 10/-

Shades : Blanche, Rachel, Naturelle, Rosée, Basanèe.

ROUGE INVISIBLE NILDÉ

in the Sifter Box.

| Small size - | - | - | - | - | 1/6 |
|-----------------|---|---|---|---|-----|
| In Jeather case | - | - | - | - | 5/6 |

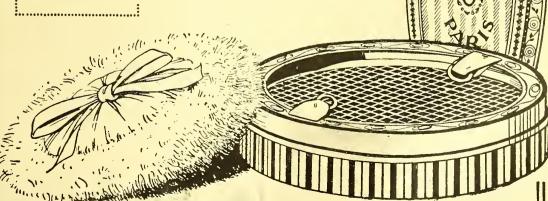
Tints:
Brune & Blonde

THROUGH YOUR WHOLESALE HOUSE.

EACH BOX CONTAINS A PUFF

NILDÉ, Paris

British and Colonial Agents:
8 BLENHEIM ST., LONDON, W.1



The Standard Mark for all that is Best in Soaps, etc.,

is

COOK'S, LONDON.

M.

HOUSEHOLD SOAPS
TOILET SOAPS
MEDICATED SOAPS
DISINFECTANT SOAPS
DISINFECTANT FLUIDS
AND POWDERS



Highest Awards have been received at great International Exhibitions, and the best proof that they have received the highest of all awards—'Public Approval," is that Cook's Soaps meet with universal Public demand.

For

PURE TOILET SOAPS

made of rich super-creamed material, deliciously perfumed.

MEDICATED SOAPS

that have received the commendation of eminent Physicians.

HOUSEHOLD SOAPS

that have received Grands Prix at International Exhibitions.

DISINFECTANTS

that have been acknowledged by the "Lancet" to be second to none.

WE ARE AT YOUR SERVICE.



A. S. LLOYD'S

(THE GENUINE).

For Shaving without Soap, Water, or Brush.



ENTERED AT STATIONERS' HALL.)

A. S. LLOYD'S EUXESIS

FOR SHAVING WITHOUT THE Use of SOAP or Water.

DIRECTIONS FOR USB.

Unscrew the cap at the top, and gently press the broad end, always taking or re to do so from the bottom, by which the tube is rendered perfectly air-tight; when enough is obtained apply it to the beard either with a small soft brush or the finger, rubbing it a little; then apply the razor, and although but little of the Euxesis be seen on the face, the beard will be removed with the greatest ease and comfort. It will be found very beneficial to wash before shaving. It is not intended to make a lather like soap. When the tube is not in use, besure to screw on the capagain,

By the Original & Sole Manufacturer & Proprieto:

BO TO 33, BERNERS 91 TO 95, CITY RD ST. OXFORD ST. W. FINSBURY, E.C. ENGLAND, LONDON,

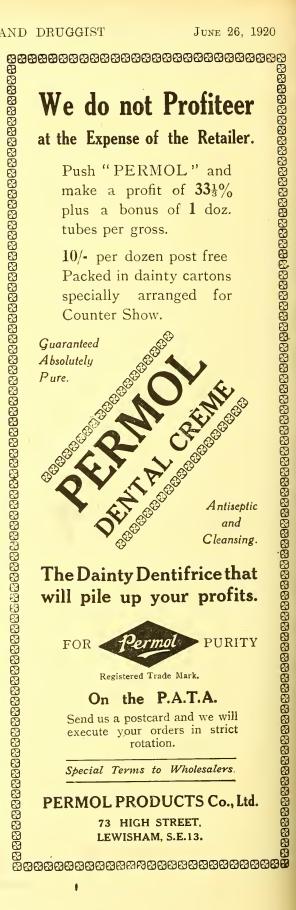
Sold by all Perfumers and Chemists throughout the World.

R. HOVENDEN & SONS having purchased, under an administration suit, the Business of the late A. S. LLOYD, with the Receipt, Trade-Mark, and Goodwill of the celebrated Euxesis, the Trade are cautioned that the original and genuine Euxesis is now manufactured at our Factory ONLY, and may be obtained at either of our Warchouses.

PRICES ON APPLICATION.

NOTICE.—THE GENUINE A. S. LLOYD'S EUXESIS bears a label printed in BLACK only on a Yellow ground, with our Trade Mark at the bottom, as Illustration.

Proprietors: R. HOVENDEN & SONS, LTD., LONDON: 29-33 Berners Street, W.; and 89-95 City Road, E.C.





A. S. LLOYD'S EUXESIS

For Shaving without Soap, Water, or Brush.

CAUTION to the TRADE

Labels on the genuine EUXESIS not only bear signature of A. S. Lloyd in Black Ink, but also

"Prepared only by his Widow and signature of

'Aimee Lloyd'" in RED.



Sole Manufacturers and Proprietors:

AIMÉE LLOYD & Co.,

23 PANTON STREET (Formerly named SPUR STREET),

HAYMARKET, LONDON, S.W.

N.B.—When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDO F'S).



Henna Shampoo

Your Customers will insist on the

Evan Williams'

SHAMPOO

having been taught by experience. Are you ready to meet their demands? Stock moves freely at a handsome profit.

Full particulars are included in The SHAMPOO SALESMAN, which is sent free on request.

The EVAN WILLIAMS CO., LTD., 18 & 18a, Ogle St., Foley St., London, W.1.

SELLERS



ANZORA CREAM for greasy scalps, and ANZORA VIOLA for dry scalps, are splendid sellers, and offer you a good margin of profit. They are the two fines preparations in the world for men's hair. Order a supply to-day. Obtainable from all wholesalers.



TRADE TERMS:

12/- per dozen, retailed at 18/-20/- ,, ,, ,, 30/-

Attractive Showcards sent post free on request.



Masters the Hair

Anzora Perfumery Co. Ltd. Willesden Lane, London, N.W.6

BE SURE AND ADD

La-Rola Rose Bloom

TO YOUR STOCK AT ONCE.

as it is being largely advertised in the "Daily Mail," "Mirror," "Sketch," etc.

Do not lose the business through being out of stock.

It is the most natural tint on the market, and is selling well wherever introduced.

Lait La-Rola & Glycerine & Cucumber

All these articles are protected at FACE VALUE. Write for Display Terms and save 10%.

M, BEETHAM & SON, Cheltenham.

The Popularity of "Harlene Hair Drill."

EVERY DAY EMPHASISES THE NECESSITY **PUBLIC** MEETING THE DEMAND. FOR

The widespread publicity initiated by the Proprietors of "Harlene" over a number of years and vigorously maintained right up to the present time, in spite of many difficulties and increasing expense, continues to draw an immense response from all parts of the country. Thousands of sample parcels are dispatched daily, thus increasing the number of possible customers to retail stores everywhere.



NOTE-The Contents of the Free HARLENE OUTFITS comprise:

- 3. A Trial Bottle of "Uzon" Brilliantine.
- A Trial Bottle of Harlene. A "Cremex" Shampoo Powder.
- 4. Book of Instructions.

FOLLOW THE TIDE OF SUCCESS.

Watch the Great Free Gift Advertising Campaign that brings the Customers to your Shop.

HAVE YOU A GOOD STOCK OF "HARLENE HAIR DRILL" PREPARATIONS?

No Chemist or Store can afford to be without : this unique line of Toilet Preparations :

- "HARLENE" FOR THE HAIR
- "UZON" BRILLIANTINE
- "CREMEX" SHAMPOO

POWDERS

"ASTOL" FOR GREY HAIR

- "ASTINE" VANISHING
 - CREAM
- "ASTINE" TOOTH CREAM
- "ASTINE" SHAVING STICK
- "ASTINE" NAIL CREAM

For Particulars, Terms, &c., write to

20, 22, 24 & 26 LAMB'S CONDUIT HARLENE, Ltd., 20, 22, 24 LONDON, W.C. 1.

▥

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THIS article has now been sufficiently long before the public to enable them to sample its merits. This the public have done on a large scale, and many delighted users have come again and again to the retailers they buy from for further supplies. The demand has been extraordinary. At first the proprietors tried to cope with it per post, but they soon saw that this was too cumbersome and tedious a method, and they are now gladly availing themselves of the services of the trade. Wavcurl is a first-class seller and a first-class payer, too. The profits are all they should be on a toilet line, as any reader can see for himself in the P.A.T.A. Protected List. Forty per cent (40%) should surely awaken your interest, especially in a line that sells at sight. All classes of ladies, from the titled dame to the busy factory worker, are using it as their readiest means of keeping themselves attractive, notwithstanding the great demand there is just now upon their time. To the user it is a great time-saver; to the seller, a great money-maker. We invite your application for Showcards and Dummies for window-dressing. A Wavcurl window-show in an industrial or factory area will simply make the shillings shower into your till. Address post card to HIS article has now been sufficiently long before the

WAVCURL THE

FULWOOD HOUSE, HIGH HOLBORN, W.C. 1

1/6 Duvetine (Superfluous 1/6 Duvetine (Supermous)

Hair Remover)

1/6 Waveurl Hair Tonic

(9 in Powdered Form)

1/6 Eyelashine

Showcards for Window t

Charge Per doz. 1/6 Wavcurl (in packets) ... 9/-2/9 Wavcurl (in bottles) ... 21/-1/6 Complexion Cream ... 10/-2d. Shampoo Powder ... 15/gross.

Agents: PARIS .- A. W. Scott, 38 Rue du Mont Thabor. CANADA .- W. W. Barry, 1 Port Street, Montreal. ▥

All High-Class Chemists should stock

the well-known Liquid Tooth Cleanser for checking pyorrhœa. Retail 3/- and 5/- per bottle.

Also the unrivalled

DENTAIRE LACOSTE SAVON

for cleaning Artificial Teeth Plates.

Retail 2/6 per pot.

Liberal Discount to the Trade. ATTRACTIVE SHOWCARDS SUPPLIED.

Wholesale and Export:

123a Borough High Street, London, S.E.1. Telephone: Hop 1789.



The successful Remedy for PYORRHEA. Prescribed by the Dental Profession.

PRICES.

Wholesale (including Government Duty)
Dental Paste 22/- per doz. , 6d.
Mouth Wash 44/- , 1/2 Retail
2/6 per tube
5/- per bottle.
2/6 each. " Attractive discounts to retailers willing to push these Specialities.

Of Wholesalers, or direct from

ORISAL Ltd., 77 George St., Portman Sq., W. 1

The Dye with a Reputation for reliability.

SEVEN SHADES

1/6 size 12/- doz. 2/6 size 18/- doz. P.A.T.A.

The only dye giving a natural gloss to the hair.

From all wholesalers or direct

KNOX-WALKER & Co., Ltd., 422 Kingsland Rd., London E. 8

PERFUMERS! SHORTAGE OF LABOUR

Advertisers are prepared to undertake the blending of Shampoo, Tooth, and other Toilet Powders, in large or small quantities at lowest possible rates. Good workmanship and prompt delivery. Ingredients supplied if desired at lowest market prices, Writes stating requirements.

MARTIN & CO., 71 City Road, Finsbury, London, E.C.1.

"JACKEL'S CREAM"

(without Grease)

for THE HAIR.

Sold everywhere. Established 1883.

JACKEL'S CREAM

fixes the hair in any desired position; is unexcelled as a dressing and does not soil the headware. It removes Scurf and Dandruff, keeps the scalp healthy, and promotes the natural growth of the hair while maintaining its softness and brilliancy.

Prices for Wholesale & Export Houses on application.



CRYSTALLISED
1/9 CREAM 2/6
Trade Mark attached to each bottle.

FOR THE Complexion



FOR USE After Shaving

"ODELUX"

(REGISTERED).

"ODELUX" is a highly hygienic and luxurious Toilet Preparation, specially compounded and prepared for sensitive skins. It acts as a food, stimulant, and tonic, and removes from the complexion all imperfections such as redness, roughness, and freckles. It is rich and creamy in quality, and imparts to the skin a fresh and youthful bloom and beauty. Once used, always used.

Jackel et Cie (of Paris) Ltd.

488 Sauchiehall St., GLASGOW.

ESTABLISHED 1883.



HIS article has now been sufficiently long before the I public to enable them to sample its merits. This the public have done on a large scale, and many delighted users have come again and again to the retailers they buy from for further supplies. The demand has been extraordinary. further supplies. The demand has been extraordinary. At first the proprietors tried to cope with it per post, but they soon saw that this was too cumbersome and tedious a method, and they are now gladly availing themselves of the services of the trade. Wavcurl is a first-class seller and a first-class payer, too. The profits are all they should be on a toilet line, as any reader can see for himself in the P.A.T.A. Protected List. Forty per cent (40%) should surely awaken your interest, especially in a line that sells at sight. All classes of ladies, from the titled dame to the busy factory worker, are using it as their readiest means of keeping themselves attractive, notwithstanding the great demand there is just now upon their time. To the user it is a great time-saver; to the seller, a great money-maker. We invite your application for Showcards and Dummies for window-dressing. A Wavcurl window-show in an industrial or factory area will simply make the shillings shower into your till. Address post card to

WAVCURL THE

FULWOOD HOUSE, HIGH HOLBORN, W.C. 1

1/6 Duvetine (Superfluous Per doz. 1/6 Wavcurl (in packets) ... 9/-2/9 Wavcurl (in bottles) ... 21/-

1/6 Complexion Cream ... 10/-... 15/-

Hair Remover)

16 Waveurl Hair Tonic
(9 in Powdered Form)

16 Eyelashine
gross.

16 Duwrine Supernuous

9/16 Waveurl Hair Tonic
(9 in Powdered Form)

9/16 Eyelashine

9Boweards for Window

10 Dummies for Show

1 charge

Agents: PARIS .- A. W. Scott, 38 Rue du Mont Thabor. CANADA .- W. W. Barry, 1 Port Street, Montreal

2d. Shampoo Powder

All High-Class Chemists should stock

DENTIFRICE

the well-known Liquid Tooth Cleanser for checking pyorrhoea. Retail 3/- and 5/- per bottle.

Also the unrivalled

SAVON DENTAIRE LACOSTE

for cleaning Artificial Teeth Plates.

Retail 2/6 per pot.

Liberal Discount to the Trade. ATTRACTIVE SHOWCARDS SUPPLIED.

Wholesale and Export:

123a Borough High Street, London, S.E.1.

Telephone: Hop 1789.



The successful Remedy for PYORRHEA

Prescribed by the Dental Profession. PRICES.

Wholesale (including Government Duty)
Dental Paste 22/- per doz. , 6d
Mouth Wash 44/- " 1/Special Brush 24/- " 1/-

Retail
2/6 per tube
5/- per bottle.
2/6 each. Attractive discounts to retailers willing to push these Specialities.

Of Wholesalers, or direct from ORISAL Ltd., 77 George St., Portman Sq., W. 1

The Dye with a Reputation for reliability.

DYE

SEVEN SHADES.

1/6 size 12/- doz. 2/6 size 18/- doz. P.A.T.A.

The only dye giving a natural gloss to the hair.

From all wholesalers or direct

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Jackel et Cie (of Paris) Ltd.

488 Sauchiehall St., GLASGOW.

ESTABLISHED 1883.

Telephone: Trafford Park 787.

Telegrams: "Stevenut Manchester."

Contractors to H.M. Government.

G. STEVEN & CO.

Wholesale Chemists & Drug Grinders,

Cornbrook Street and Chorlton Road. MANCHESTER.



Sell themselves! All four repeaters! Contents guaranteed genuine.

Packed in white glass toilet Bottles, with sprinklers and lithographed labels.

Price 10/6 per dozen net.

Samples of labels on request.

The right article brings the repeat orders.



are Preparations of distinction which are attractively packed, making a most effective display and show an excellent profit.

Anglodol Dental Paste

Retail Price, 7½d. & 1/3.

Anglodol Dental Powder Retail Price, 9d. & 1/6.

Anglodol Liquid Dentifrice

Retail Price, 2/6 & 4/-

Anglodol Savon de Luxe

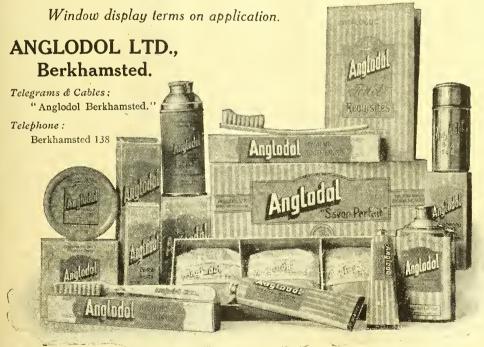
Per box of 3 tablets, 3/-

Anglodol Shaving Stick

In Handsome Metal Case, 1/6 each.

Anglodol Hygienic Tooth Brushes

Each Sterilised in Carton, Retail Price Ladies' 2/-, Gents', 2/6.



Support Home Industry

A GOOD SELLING PROPOSITION:

 $33\frac{1}{3}\%$ ON SALES 50 % ON COST.

BY SELLING

vma' Nail Clippers

(BRITISH MANUFACTURE)



The finest Nail Clipper on the market. British manu-facture throughout, of finest quality steel. Heavily nickel-plate: and perfect finish. Delivery from stock, fastened

Delivery from stock, fastened 12 or 24 on card. Sells at sight, and gives satisfaction to Chemist an Chemist an cus omer alike.

Trade Price

16/- doz.

Write to-day for Sample Card.

To be obtained from all the leading Factors, or from the Proprietors,

WARMINGTON, TURNER & CO.

II QUEEN VICTORIA STREET, LONDON, E.C. 4.

Telegrams:
Oewarmitur, Cannon, London."

Phone: Central 7851.

ZEAL'S REGISTERED

The "REPELLO"

Requires no shaking down.

Guaranteed Accurate.

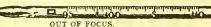
Good Selling Lines for Chemists



NEW IMPROVED LENS FINDER

The only Easy Reading Magnifying Clinical Thermometer on the Market.

IN FOCUS.



The square mark engraved on lens front locates the Mercury column immediately. SPECIAL AWARD AND GOLD MEDAL, NEW ZEALAND 1907. SILVER MEDAL, IND A 1909. SILVER MEDAL, LONDON, 1913.

G, H. ZEAL, 82 Turnmill St., LONDON, E.C.

Wholesale Manufacturer of

THERMOMETERS. CLINICAL

CONTRACTOR TO H.M. GOVERNMENT.

Established 1888.

Telephone No.: 12438 Central.

The Chemists' Manfg. Co., Ltd.

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Madam Var's "Fairskin"

In very elaborately decorated square tin boxes with rounded corners. Each box containing a PUFF, to retail at 2/6.

21/- dozen.



Special Bonus of 2 boxes to the dozen with opening orders, so that for 21/- outlay you realise 35/-, which is over 65 % Profit on Cost.

HAVE YOU SEEN OUR NEW

BRONZED TINS

Assorted Gold, Silver, Violet, Blue, Green, Heliotrope, etc.

The most attractive Containers ever offered to the Trade. Very high-class and ahead of anything yet offered.

Tooth Powder Tins, $2\frac{1}{16} \times 1$ 36/- $2\frac{7}{16} \times 1...$ 42/-

Talcum Powder, Oval.... 66/-Equally suitable for Medicated Dusting Powder, Baby Powder,

etc. etc. Face Powder Boxes 81/-Square, round cornered, $3\frac{1}{8} \times 3\frac{1}{8} \times 1\frac{3}{8}$

Shaving Soap Cases 39/-

SAMPLES ON REQUEST.

Chemists wanting really high-class Containers should not fail to see these goods.

123/5 Newington Causeway, LONDON, S.E. 1.

C. DAMSCHINSKY'S

AMERICAN LIQUID DYE.

Single Preparation for the Hair and Beard.

, MADE IN
FIVE NATURAL SHADES,
BLONDE, LIGHT BROWN,
BROWN, DARK BROWN,
AND BLACK.

2/- Size 15/- per doz. net.

3/- .. 22/-



This excellent Dye has an enormous Sale all over the World.

SIMPLE TO USE.

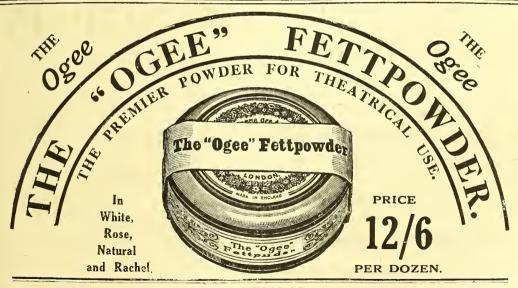
WILL DYE
RED, GREY OR FADED HAIR
TO THE DESIRED SHADE
IN A FEW MINUTES.
IT IS NOT A BLEACH.

WILL NOT DYE DARK HAIR LIGHTER.

From all Wholesale Houses or direct from sole British Agents:

OSBORNE, GARRETT & CO., LIMITED,

LONDON, BIRMINGHAM AND GLASGOW.

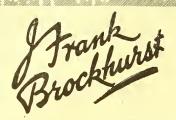


PROPRIETORS OF

THE CELEBRATED "OGEE" BRAND OF GREASE PAINTS,

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OSBORNE, GARRETT & CO., LIMITED, BIRMINGHAM. LONDON, W. GLASGOW.

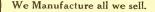


THOUGHT gives birth to EFFICIENCY, and efficiency in turn marks out the high road to -PROGRESS and PROFIT.

HE importance of Originality, Attractiveness—EFFICIENCY in connection with the wrapping, packing and advertising of your "special line" appeals to you. From experience, you KNOW that "STOCK IDEAS" waste time and money and create disappointment. You require something original—something entirely different from other houses. The idea that will make the most prominent window and counter display in Cartons, Labels, Wrappings, Showcards, Booklets and Leaflets.

—We employ our own staff of Artists, Ideas Men and Copywriters who understand the Drug Trade. Send us a few particulars, we will originate "just" the idea you require for the complete scheme or individual piece of publicity. No charge is made for plans submitted. Everything is treated confidentially.

7 Red Lion Square Holborn London W.C.I.



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Wholesale & Shipping only supplied.



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MANICURE PARTS

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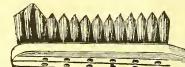


Factories: Islington & Finsbury Park, London, N.

ROBERT ADDIS & SON, Tooth Brush Manufacturers, London Fields, N.E.

The "ASEPTIG" or "PROPHYLACTIC."

When not in use, a Tooth Brush should not be allowed to remain wet, or it becomes offensive. The advantage of this Brush is—it can be hung up to drain, allowing the air to dry and purify it.



RECISTERED NO. 593,367.

The second ENGLAND

VENTILATED, IMPROVED.

To be obtained from Wholesale Houses. Packed in cartons, facilitates sales and ensures brush reaching user in clean and antiseptic condition.

SHAVING BRUSHES OF QUALITY



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F. LAVISTA & FREEMAN, 10 MOOR LANE, FORE STREET. LONDON, E.C. 2. Phone: LONDON WALL 1656. Wires: "SPAZZOLA, BARB LONDON."

And Forest Brush Works, Walthamstow, Essex.

We are now in a position to deliver our **EEST LONDON-MADE** Shaving Brushes in Four Qualities, as under:

BONE HANDLES. STANDARD SIZES.

Series A. Pure Badger. B. Pure White Bristle. , D. Imitation Badger.

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Wholesale and Export.

APPLY FOR PRICE

To Wholesale & Export Buyers only.

IT WILL PAY YOU

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NEW **SHOWROOM**

We have the Right Goods at the Right Prices!!

All French Manufacture. Delivery from London Stock, or Prompt.

Chemists', Druggists' and Perfumers' Sundries.

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DWELLS LTD.

RELIABLE TOOTH BRUSHES.

Gloria Silverdrawn 20/- doz.

(Assorted Patterns.) ditto Hard, White or Yellow 22/-

ditto Ex. hard ,, 24/-

16/~ Mitre

14/-Elephant

Anchor

We do not Sell Foreign Tooth Brushes, but our own make only.

A selected £12 parcel of Hair Brushes from 50/- to 150/- per doz., carr. paid.

Made at our Factories, AXMINSTER, DEVON.



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AMAMI

British Manicure Preparations are Standards of Dainty Excellence

| | | | | | Per doz. |
|------|----------------------|---|---------------------|-------|----------|
| 1507 | Nail Polishing Stone | - | Better than pre-war | - | - 6/9 |
| 1504 | Orangewood Sticks | ~ | Perfect Finish - | _ * | - 13/6 |
| 1505 | Emery Boards - | - | | - | - 13/6 |
| 1510 | Cleansene | - | Removes Stains - | - | - 13/6 |
| 1519 | Cuticle Fluid - | - | | - | - 13/6 |
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| 1500 | Crayons | | In Boxwood Cases | - | - 6/9 |
| 1517 | Polishing Cream - | - | Combined Polish and | Cream | - 13/6 |
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5006 Manis t



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PRICHARD & CONSTANCE

Court Perfumers
ESTABLISHED 1831

469 Holloway Road, LONDON, N.7

Australian Agents: PIKE & RIPLEY, Sydney.

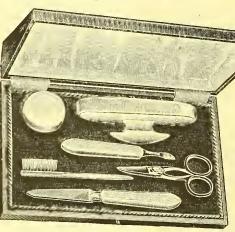
Made in

MANICURE CASES IN ALL SHAPES AND STYLES

Prices Subject to Fluctuations



The "Daphne" Set, containing Polisher, Nail Crayon, etc. 10/6 per dozen.



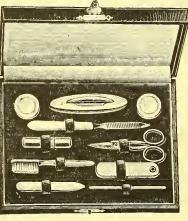
400. Fine quality Case, extra large Polisher. 21 6 each.



Very neat Case in strong Cardboard, containing Polisher, Nail Crayon, Emery Boards, etc. 26/- per dozen.



27 A.
Leatherette Case, Satin and Velvet
Lined, containing Scissors,
Nail Polisher, Flexible File, etc.
7/6 each.



216.
Leatherette Case, Satin and Velvet Lined,
Everything for Nail Culture.
21/- each.



232. Exceptional value, good quality fittings. 11/9 each.



30.
Satin and Velvet Lined Case, best "Ivorine" Fittings.
17/6 each.



Fancy Leather Case, containing Polisher, Emery Boards, Nail Crayon, etc. 30/-per dozen.



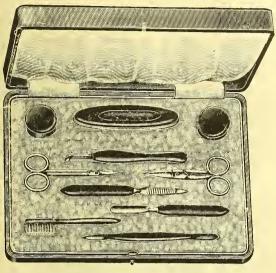
215. Leatherette Case, Satin and Velvet Lined. 15/6 each.

HENRY C. QUELCH & CO., 4 & 5 Ludgate Square, London, E.C. 4.

Prices Subject to Fluctuations.

MANICURE CASES BONE EBONY AND IVORINE FITTINGS

Made in England.



804/1

Ebony fitted Case, containing Fine Cuticle Scissors. Nail Scissors, File, Cuticle Knife, etc.

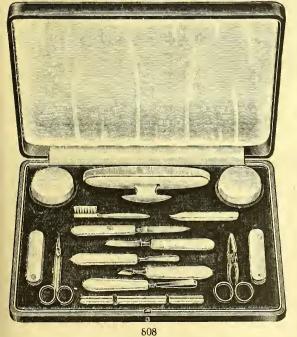
44/- each.



202

Very smartly designed Case, best quality Scissors, Flexible File, etc.

44/- each.



000

Very handsome Case, all fittings of the very best quality.

60/- each.



807

"Ivorine" fitted Case, Everything for the "Manicurist."

54/- each.

HENRY C. QUELCH & CO., 4 & 5 Ludgate Square, London, E.C. 4.

Made in

England

MANICURE CASES IN ALL SHAPES AND STYLES

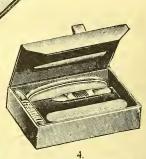
Prices Subject to Fluctuations



The "Daphne" Set, containing Polisher, Nail Crayon, etc. 10/6 per dozen.



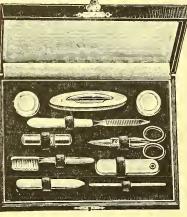
Fine quality Case, extra large Polisher. 21 6 each.



Very neat Case in strong Cardboard, containing Polisher, Nail Crayon, Emery Boards, etc. 26/- per dozen.



27 A. Leatherette Case, Satin and Velvet Lined, containing Scissors, Nail Polisher, Flexible File, etc. 7/6 each.



216.
Leatherette Case, Satin and Velvet Lined,
Everything for Nail Culture.
21/- each.



Exceptional value, good quality fittings. 11/9 each.



30.
Satin and Velvet Lined Case, best "Ivorine" Fittings.
17/6 each.



Fancy Leather Case, containing Polisher, Emery Boards, Nail Crayon, etc. 30/-per dozen.

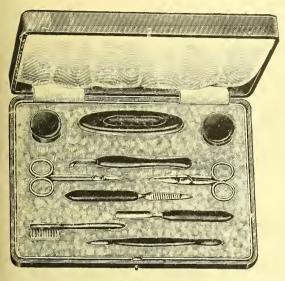


215.
Leatherette Case, Satin and Velvet Lined.
15/6 each.

Prices Subject to Fluctuations.

MANICURE CASES BONE EBONY AND IVORINE FITTINGS

Made in England.



804/1
Ebony fitted Case, containing Fine Cuticle Scissors. Nail Scissors, File, Cuticle Knife, etc.
44/- each.



Very smartly designed Case, best quality Scissors, Flexible File, etc.

44/- each.



808

Very handsome Case, all fittings of the very best quality.

60/~ each.



"Ivorine" fitted Case, Everything for the "Manicur.st."

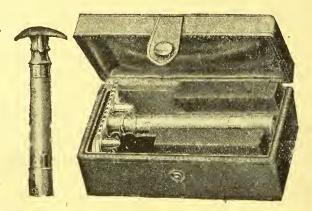
54/- each.

HENRY C. QUELCH & CO., 4 & 5 Ludgate Square, London, E.C. 4.

FAMOUS FRENCH Phœnix Safety Razor

Triple Silver-plated, and manufactured by the only Continental firm with a ten years' experience in the manufacture of the real article, it can be retailed at a much lower figure.

Equal to any Safety Razor on the Market.



Phænix Blades are superior to any other make.

Sole Agents for Great Britain, Colonies, and Protectorates:

T. HAYDEN & CO.

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118/122 HOLBORN, LONDON, E.C.1 And at 17 RUE DE LA GRANGE-BATELIERE, PARIS.

Manufacturers of High-grade Druggists' Sundries, Toilet Articles and Cutlery.

WHOLESALERS AND EXPORTERS ONLY SUPPLIED.

An Entirely New Line in Safety Razors

The 'T.P.' SAFETY RAZOR & BRUSH COMBINED

A practical, every-day Shaving Tool of finest quality and workmanship and is of inestimable value for the Tourist and Traveller. The frame is a heavily plated Luna pattern, and can be had fitted in cases or in bulk. Fully protected and patented, No.137382/19

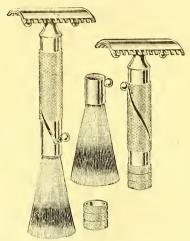


ILLUSTRATION No. 1 shows Brush ready for Action. No. 2 shows Brush detached for renewal or cleaning purposes. No. 3 shows Razor complete,

MADE UPINA VARIETY of STYLES

FITTED with BLADES COMPLETE
BRUSHES ARE RENEWABLE
BADGER BRUSHES CAN BE
SUPPLIED IF REQUIRED



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"CUTEX" NAIL PREPARATIONS

NORTHAM WARREN CO., MONTREAL AND NEW YORK

YOU ARE LOSING BUSINESS IF YOU ARE NOT CARRY-ING A FULL STOCK

"CUTEX" Manicuring Preparations

| No. |
|--|
| mover (Small) 2/6 21/6 2 "Cutex," The Ideal Cuticle Remover (Medium) 5/- 43/- 4 "Cutex" Nail White 2/6 21/6 5 "Cutex" Nail Polish Cake (White) 2/6 21/6 6 "Cutex" Nail Polish Cake (Pink) 2/6 21/6 7 "Cutex" Nail Polish Cake (Trial Size) 1/- 7/- 8 "Cutex" Nail Polish Powder 2/- 16/- 9 "Cutex" Nail Polishing Paste (Pink) 2/6 21/6 10 "Cutex" Nail Polishing Paste (Plain) 2/6 21/6 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
| 2 "Cutex," The Ideal Cuticle Remover (Medium) 5/- 43/- 4 "Cutex" Nail White 2/6 21/6 5 "Cutex" Nail Polish Cake (White) 2/6 21/6 6 "Cutex" Nail Polish Cake (Pink) 2/6 21/6 7 "Cutex" Nail Polish Cake (Trial Size) 1/- 7/- 8 "Cutex" Nail Polish Powder 2/- 16/- 9 "Cutex" Nail Polishing Paste (Pink) 2/6 21 6 10 "Cutex" Nail Polishing Paste (Plain) 2/6 21/6 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
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| 4 "Cutex" Nail White 2/6 21/6 5 "Cutex" Nail Polish Cake (White) 2/6 21/6 6 "Cutex" Nail Polish Cake (Pink) 2/6 21/6 7 "Cutex" Nail Polish Cake (Trial Size) 1/- 7/- 8 "Cutex" Nail Polish Powder 2/- 16/- 9 "Cutex" Nail Polishing Paste (Pink) 2/6 21/6 10 "Cutex" Nail Polishing Paste (Plain) 2/6 21/6 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
| 6 "Cutex" Nail Polish Cake (Pink) 2/6 21/6 7 "Cutex" Nail Polish Cake (Trial Size) 1/- 7/- 8 "Cutex" Nail Polish Powder 2/- 16/- 9 "Cutex" Nail Polishing Paste (Pink) 2/6 21 6 10 "Cutex" Nail Polishing Paste (Plain) 2/6 21/6 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
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| 7 "Cutex" Nail Polish Cake (Trial Size) 1/- 7/- 8 "Cutex" Nail Polish Powder 2/- 16/- 9 "Cutex" Nail Polishing Paste (Pink) 2/6 21 6 10 "Cutex" Nail Polishing Paste (Plain) 2/6 21/6 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
| Size) 1/- 7/- 8 "Cutex" Nail Polish Powder 2/- 16/- 9 "Cutex" Nail Polishing Paste (Pink) 2/6 21 6 10 "Cutex" Nail Polishing Paste (Plain) 2/6 21/6 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
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| 11 "Cutex" Liquid Nail Enamel 3/- 25/6 13 "Cutex" Cuticle Comfort 2/6 21/6 |
| 13 " Cutex" Cuticle Comfort 2/6 21/6 |
| |
| |
| 15 "Cutex" Rouge 2/6 21/6 |
| 16 "Cutex" Compact Manicure Set 4/- 36/6 |
| 17 "Cutex" Travelling Manicure Set 11/6 93/- |
| 18 "Cutex" Boudoir Manicure Set 22/- 186/- |
| 22 "Cutex" Nail Polish Stick 2/- 16/- |
| 31 "Cutex" Cold Cream 2/6 21/6 |

THESE PREPARATIONS CAN
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WHOLESALE HOUSES



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No. 18 BOUDOIR SET

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Telegrams: "Refreshing, Cent., London."

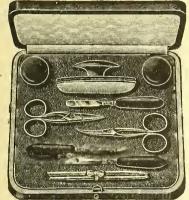
Telephone: Central 4461-4462.

Established 1892.

R. J. REUTER,

Head Office: 69 CARTER LANE, LONDON, E.C.4.

19/20 Queen's Buildings, Old Bailey, London, E.C. Factoru:



SPECIALITIES

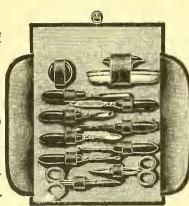
Inquiries invited for the following specialities of our own manufacture.

> "VĒVAX" Trade Mark

MANICURE CASES

Roll-up, folding or box patterns.

Over 320 numbers to select from.



Manicure requisites of every description in stock

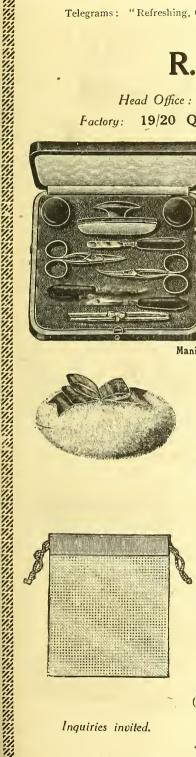


"VĒVAX"

Trade Mark

All varieties and sizes suitable for Retail and Export trade, highest class finish, artistic colours and designs. (Over 450 sizes and designs to select from.)

> "VĒVAX" Trade Mark



A large selection manufactured with exclusive materials, guaranteed suitable for export to any part of the world.

"VĒVAX"

Trade Mark

(Roll-up toilet tidies.) (Over 100 patterns and designs to select from.)

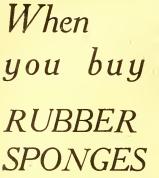
Inquiries invited.

Prices on application.

Special Quotations for quantities.

IT WILL PAY YOU TO VISIT OUR SHOWROOM.





choose the quality
product of wellknown
British Rubber
Manufacturers.



BELDAM

BRITISH QUALITY

A LIFELONG experience of Rubber and Rubber Manufacture—years of careful and costly experiment—have enabled us to produce the perfect Rubber Sponge—the Beldam.

Beldam Rubber Sponges are remarkable for their purity—from which follow their Smoothness, their Softness and Cleanliness in use—also their capacity for absorption and their length of life.

They provide the perfect sponge for use in the toilet, the bath, the lavatory, the sick room or the surgery.

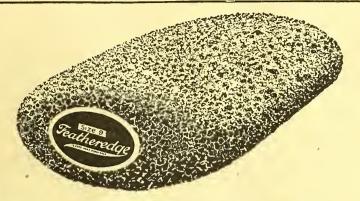
Medical men recommend them. They are unaffected by boiling water or by strong disinfectant.

They are made in five sizes. And the prices are strictly moderate.

Addvess:

Rubber Sponge Dept., The Beldam Tyre Co. (1920), Ltd., Brentford, Middlesex.





"Featheredge" Rubber Sponges

are durable and do not harden. Being made of Rubber they are perfectly sanitary. Germs cannot live in Rubber.

Each Sponge is labelled with the Trade Mark



which is a guarantee of quality.

When used with soap, they make delightful lather, are invigorating and give a healthy glow to the skin.

They are absorbent and keep clean and pure.

MADE IN NINE SIZES

The "Featheredge" has stood the test of time, it having been sold for many years.

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MARKT & CO. (London), LTD. A MERICAN MERCHANTS,

98 Clerkenwell Road - LONDON, E.C.1

Telegraphic Address: Cresswell, Westcent, London."

WORLD'S HEADQUARTERS FOR

SEASON 1920.

INTERNATIONAL SPONGE IMPORTERS, LIMITED.

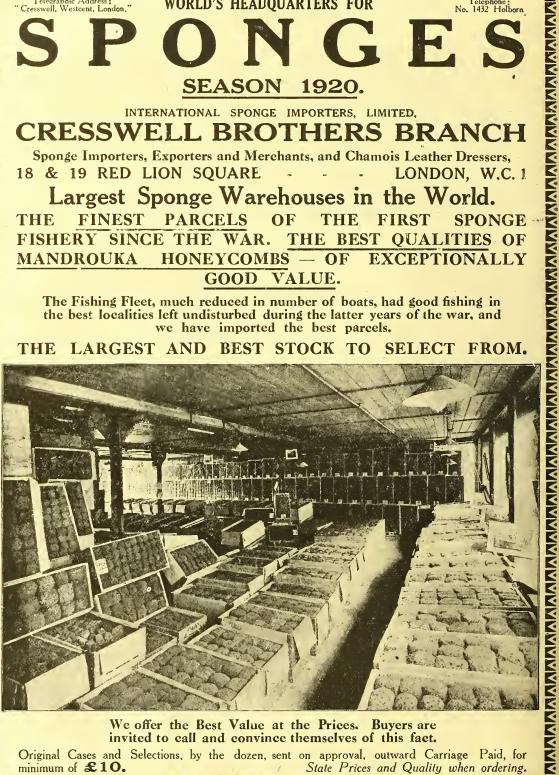
CRESSWELL BROTHERS BRANCH

Sponge Importers, Exporters and Merchants, and Chamois Leather Dressers, 18 & 19 RED LION SQUARE LONDON, W.C. 1

Largest Sponge Warehouses in the World. FINEST PARCELS OF FIRST THE THE SPONGE FISHERY SINCE THE WAR. THE BEST QUALITIES OF HONEYCOMBS — OF EXCEPTIONALLY **MANDROUKA** GOOD VALUE.

The Fishing Fleet, much reduced in number of boats, had good fishing in the best localities left undisturbed during the latter years of the war, and we have imported the best parcels.

LARGEST AND BEST STOCK TO SELECT FROM. THE



We offer the Best Value at the Prices. Buyers are invited to call and convince themselves of this fact.

Original Cases and Selections, by the dozen, sent on approval, outward Carriage Paid, for minimum of £10. State Prices and Quality when ordering.





| | | | 01 | /AL | | | | | |
|-------|----------------|------|------|------|------|------|-----------|--|--|
| 1 | No. 0 | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | RETAIL 1'- | 1/6 | 2/- | 2/9 | 4/- | 5/- | 6/6 | | |
| 1 | Per doz. 8/- | 10/6 | 15/- | 22/- | 30/- | 39/- | 50/- | | |
| 1 | In boxes of 24 | 24 | 12 | 12 | 12 | 6 | 6 pieces. | | |
| ROUND | | | | | | | | | |
| 1 | No. R1 | R 2 | R 3 | 3 | R 4 | R5 | R 6 | | |
| | RETAIL 1/9 | 2/3 | 3/6 | ; | 5/- | 6/6 | 8/- | | |
| i i | Per doz. 13/6 | 18/6 | 27/ | - 3 | 39/- | 50/- | 60/- | | |
| | In boxes of 24 | 12 | 12 | | 12 | 6 | 6 pieces, | | |

TRADE

Telegrams: Aybelim, Finsquare, London, Cables: Code, ABC, 5th Edition.



Telephone:

1348 1349

Pte. Exchange.



"PERFECTUM" Hot Water Bottle





Good Reputation. Reliable Quality. Superior Make, Finish and Sterling Value.

ARTHUR BERTON

15 & 17 Worship Street, LONDON, E.C. 2

MANCHESTER, 46a MARKET STREET. ALSO AT

GLASGOW, 11 MILLER STREET.

The Brass Flask & Capsule Co., Ltd. Cox Street, St. Paul's Square, Birmingham

HAVING now fected our extensive plant, we are in a position to offer for early delivery a series of Containers in assorted shapes and variety finishes especially adapted to the packing of high-class toilet articles.

Your inquiries will be appreciated, and receive our prompt attention.

High-Class Metal Containers

Shaving Soap Concentrated Perfumes Evebrow Pencils Lipsalve Tubes Nail Crayon Tubes Poudre Compacte Boxes Dentifrice Boxes Aseptic Syringe Cases Soap Boxes Bottle and Jar Caps Tops in assorted metals for Tooth and Talcum Powder Boxes.

Special facilities for working up special designs and new shapes to customers' own requirements

The Brass Flask & Capsule Co., Ltd.

Cox Street, St. Paul's, Birmingham.

Phone: Central 2.

Telegrams: "Micrometer."

London Office: 5 GREAT WINCHESTER STREET, E.C. 2. Phone: Central 1449. Telegrams: "Demitints, Phone, London."



1920: 11th Season

What is said in 1920.

17th May, 1920.

"Please send as soon as possible, as I am right out, and have a big run on it."

17th May, 1920.

"Have run out quite suddenly."

29th April, 1920.

"Please forward per return Straw Hat Cleaner to value enclosed am urgently in want of same." Are you prepared for the demand?

Each packet carries 1½d. profit for you.

SLEGGS'
TOBOGGAN
GINGER.

"RAILOX" NIT DESTROYER. What was said in 1911.

18th July, 1911. "Please send another supply Hat Cleaner. It has been selling very well."

"It seems to be good stuff, and well liked."

"They have sold very well, and given every satisfaction."

Milner's Chemical Co.

44 Robson Street,

Liverpool.

Scircical Dissings

Packed to suit Customers' requirements.

BANDAGES

CREPE

DOMETTE

FLANNEL PLASTER OF

PARIS

CRINOLINE

OPEN WOVE

ABSORBENT GAUZES ABSORBENT RIBBON

ABSORBENT WOOLS

GAUZES

ABSORBENT LINTS

ABSORBENT GAUZE TISSUE

WOOD WOOL
WADDINGS
GREY
CARDED WOOL
JUTE TOW

Special Quotations for Large Quantities,

JACONETS
SHEETINGS
BATISTES
OILED SILKS
& COTTONS
G. P. TISSUE

arnegie Pro

Contractors to H.M. Bovernment.

227-229 ESSEX ROAD, LONDON, N. 1.

Gelegrams: "Carnebros, Phone, London."

ABC Code, 5th Edition.

Gelephones: Dalston 3560 and 2318.

INQUIRIES AND CORRESPONDENCE INVITED

WHOLESALE AND EXPORT ONLY.

Chemicals Subject of Standard Turity

Acetanilid
Acid Acetyl
Salicylic

. Benzoic

" Lactic Conc.

" Salicylic " Tannic

Aloin

Amidopyrin

Araroba

Arecoline

Atropine

Barbitone

Bromides

Caffeine

Chloral

Chrysarobin

Emetine

Eserine

Guaiacol Pure

Guaiacol

Carbonate

Hexamine

Homatropine

Hydroquinone

Lithia Salts

Menthol

MEIMIOI

Methyl Sulphonal

Paraldehyde

Phenacetin

Phenazone

Phenolphthalein

Pilocarpine

Podophyllin

Potassium

Sulphoguaiacol

Quinine

Resorcin

Salicine

Salipyrin

Salol

Santonine

Scammony Resin

Sodium Benzoate

Salicylate

Sparteine

Strychnine

Sulphonal

Terpinhydrate

Theobromine

Thymol

X T ...

Vanillin

Veratrine,

Dc.

arnegie Bros.

Contractors

to To.Mo.

Government

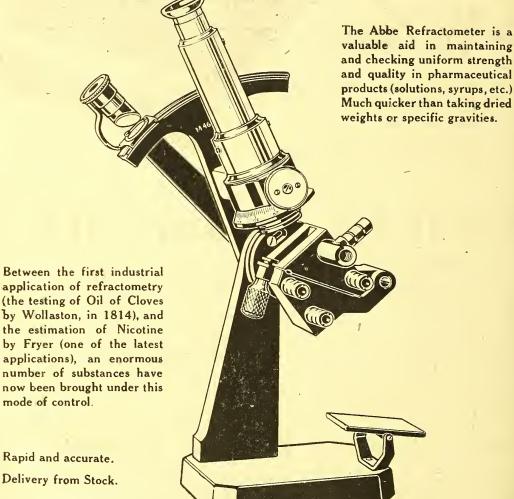
227-229 ESSEX ROAD,

LONDON, N. - - Works: BOWES PARK, N. Telegrams: "Carnebros, Phone, London." A.B.C. Code, 5th Edition. Telephones: Dalston 3560 (2 lines).

INQUIRIES AND CORRESPONDENCE INVITED.

WHOLESALE AND EXPORT ONLY.

The ABBE REFRACTOMETER



Rapid and accurate.

Delivery from Stock.

Descriptive booklet on application from the Makers-

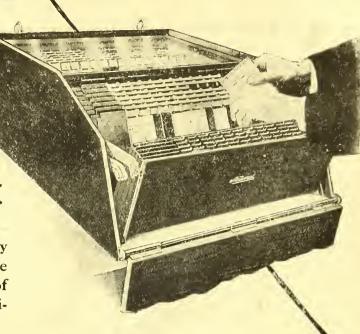
ADAM HILGER, LTD 75a, CAMDEN ROAD, LONDON, N.W.1.





A Big
Increase
in Net Profit

can be made in many shops by using a more up-to-date method of handling credit business.



THE NEW

NATIONAL CREDIT FILE

provides an effective one-writing system of accountancy, eliminating Daybooks, Ledgers and Monthly Statements.

It ensures speedy collection of accounts which are always balanced to date and ready for presentation. Eliminates disputes with customers.

Reduces bad debts and saves expense of stamps, stationery, etc. Pleases customers, increases trade, and gives more profit with less work.

Can You Afford to be Without These Advantages?

A Prominent Chemist says: "It is saving us pounds daily, and we are so well satisfied that recently we ordered another of your highest grade Registers and another File."

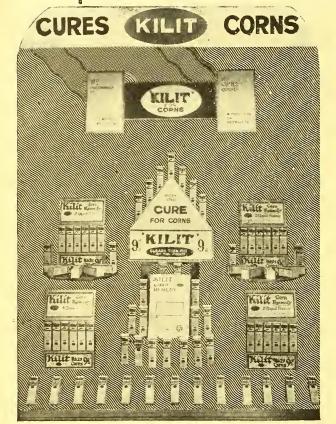
INVESTIGATE NOW. Write for special Booklet 20, giving full particulars of how this modern method will obtain maximum protection and profit on your credit business

The NATIONAL CASH REGISTER CO., Ltd., 225 Tottenham Court Road, London, W. 1.

Telephone: Museum 1680 (4 lines).

Branch Offices in all Large Towns.

Window Displays that pay your



THIS SHOW SUPPLIED FREE WITH ORDERS FOR 1 GROSS.

A Liquid Corn Remedy

P.J.F. 64(20).

Now is just the right time to make a display of Corn Remedies. You may already stock a plaster, but many people will have a liquid.

Evaporation has always been the difficulty in packing this line, but with "Kilit" we think this difficulty has been overcome. Samples we stored away last year show no trace of evaporation now.

"Kilit" is packed in our well-known "M.P.S." Series, which is a Pharmacists series de luxe, the pack and get-up being both artistic and pleasing.

Another important point has not been forgotten-your profit.

PER 57/- GROSS RETAIL PRICE 92d.

LINES IN BIG DEMAND.

LEMON SOUASH POWDER

No sugar required, and contains a terpeneless oil of Lemon. Retail 3d. per packet

THIRSTLETS ...

Effervescing Thirst Quenchers. In rolls, to sell at 2d.

STRAW HAT CLEANER

A powder that really cleans the hat. A full window show with 2 gross. Retail 2d, packet

22/- gross

12/6 gross

14/- gross

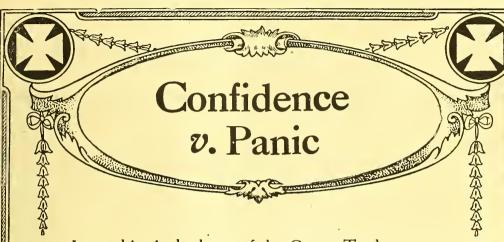
Cartwing Rawdon

418 George Street, SYDNEY.

326 Flinders Lane, MELBOURNE.

New Zealand-

161 Hereford Street, CHRISTCHURCH. Corner Albert and Durham Streets, AUCKLAND.



Lancashire is the heart of the Cotton Trade.

We attend the Liverpool and Manchester markets regularly, and are immediately aware of any change in tone.

Our prices are based on the value of cotton, and the cost of production and rise or fall in harmony.

You would not go to the Tropics for Polar Bears, so why go away from Lancashire for Cotton?

Before placing your orders for Cotton Goods elsewhere, consult us.

The whole of forty years' actual experience of cotton is placed at the disposal of our customers.

Authentic information produces confidence and acts as a stimulant to trade; but Price Panic destroys the vitals of all business.

London customers should make inquiries, and draw their supplies from

London Offices: 151-157 GOSWELL ROAD, E.C. 1.

ROBERT BAILEY & SON, Ltd.,
SURGICAL DRESSING MANUFACTURERS,
MARRIOTT STREET MILLS, STOCKPORT.

CABLES UNDISPUTED, STOCKPORT, CODE AB.C 5TH EDITION.

IMPORTANT NOTICE TO THE TRADE.

Great Public Handwriting Character Competition

£1,350 IN PRIZES

In order to advertise "LONDOVUS"—the Rat and Mouse Exterminator—the Proprietors are inviting the general public to purchase same in connection with an attractive Handwriting Character Competition which is to be advertised very largely in the press in a few weeks from now. In order that Dealers, as well as the public, should participate, we offer the following:

A Prize of £25

to each of the Three Dealers from whom the winners of the Three Highest Prizes purchased their "LONDOVUS."

The simplicity of the competition, and the value of the prizes offered, will certainly induce many thousands of members of the general public to participate in the competition; and a large and immediate demand for "LONDOVUS" will be the result.

In order to meet this demand, dealers are urged to apply AT ONCE for adequate supplies, which will be made with the utmost dispatch.

No Licence is necessary to sell "Londovus,"
It is HARMLESS to Humans and Domestic Animals.

RETAIL SELLING PRICE:

1/- size 12/- per dozen. 2/6 ,, 30/- ,, 5/- ,, £3 ,,

Above figures subject to 33½ % discount. Carriage paid. Stocked by all Wholesale Chemists, Ironmongers, etc.

ADDRESS:

THE LONDON HYGIENIC CHEMICAL CO., LTD.,

Wansey Street Works, LONDON, S.E. 17.

Stock "LONDOVUS" at once to meet great demand.

Make Hay while the Sun shines

These warm weather days mean additional business for the retailer who displays seasonable stock.

1920 IS A RECORD INSECT YEAR

The pests are enjoying a season beyond all precedent. Stinging gnats, destructive greenfly and billions of midges are giving you an opportunity of increasing turnover. Are you benefiting?

The leading Daily, Evening and Sunday papers, Weekly Journals and Monthly Magazines are telling your customers all about the efficiency of Hawley's I.K. Killer. Editorial comments upon the plague give every advert. added force. There is no doubt about the demand or supply.

TRADE PRICES.

4d. size - - 2/8 per dozen. 8d. ,, - - 5/4 ,, 1/3 ,, - - 10/- ,, 4/6 ,, - Net 36/- ,,

5% discount for £5 orders. For an order of 12 dozen and a window display a bonus of 1 dozen is given, which gives a total profit of from 60% to 71% according to the quantity purchased.

1920 Hawley's I.K. has exceeded our most optimistic anticipations. Get in a position to say the same.

HAWLEY'S I.K. KILLER.

Tamananan mananan mananan Tamanan mananan mananan mananan mananan mananan mananan mananan mananan mananan manan

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AND OLD KING SOL HAS BOOMED

ELCO FOOT TABS.

Tarkananan mananan manan manan manan manan manan T

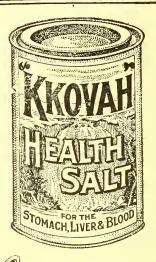
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the picnic spirit—week-end tramps are the vogue. To seize every opportunity of pushing seasonable Counter Adjuncts vigorously is the secret of the Chemist's success.

But the goods must be right, and the packing must be right. ELCO Foot Tablets gladden the feet just as the neat little tins in which they are packed gladden the eye.

In well-printed Display Outers of 3 dozen, 5/3 per Dozen Net.

EVANS SONS LESCHER & WEBB LTD.
LIVERPOOL. NEW YORK. LONDON.



The Customers are at your door. Won't you ask them to come in?

Khovah Health Salt is an old-established family aperient, the demand for which is rapidly increasing month by month.

By stocking and displaying a few tins on your counter and in your window you secure a trade which would otherwise go to the other man.

Isn't it worth while taking the extra profit, which calls for no effort on your part?

Prices and Terms for the asking.

I Covah Health Salt

SUTCLIFFE & BINGHAM,

Limited,

MANCHESTER:

Makes You Fit— Keeps You Fit.

Non-Freezing, Norwegian

COD LIVER OIL

Highest Quality Delivered by Alliance Export and Import

Co. Ltd.
CHRISTIANIA - - NORWAY.

Ex Stock London

Large consignments of-

TEST TUBES
CAPSULE BOTTLES
RECORD HYPO.
SYR:NGES and
NEEDLES

ALL-GLASS SYRINGES
VULCANITE SYRINGES
THERMOMETERS
(room, bath, clinical)
EYE DROPS, etc.

Samples and quotations sent on application to

THE OFCA COMPANY

65-66 Basinghall Street, LONDON, E.C. 2.

Telephone : London Wall 4236. Telegrams : "Aspidistra, Phone, London."

A. ROWLAND & SONS

Proprietors of

ROWLAND'S MACASSAR OIL KALYDOR and ODONTO

beg to give notice that their offices and warehouse are now at

112 GUILFORD STREET, GRAY'S INN ROAD, W.C.1.

Rowland's Macassar Oil, being now on the P.A.T.A. list, is well worth the attention of the Wholesale and Retail Trade, as it shows a fair margin of profit to all alike.



REVISED PRICE LIST PROPRIETARIES

will be ready for distribution on

JULY 1

All Chemists on our books will receive a copy in due course, and we shall be pleased to send a copy to others, post free, by request.

Showrooms:

258 EUSTON ROAD, LONDON, N.W.1.

Hours of Business: 8.30 a.m. to 6 p.m. Saturdays to 1 p.m.



Every Violiv Line links Quality with Profit. Bigger business, better turnover

When you put VIOLIV lines on your Order Sheets there is only one thing to do-show them prominently. They sell at sight—they satisfy your customers—they bring a big profit—they build up permanent custom.



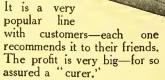
"The Perfect SUMMER DRINK."

No other s u m m e r beverage is so much appreciated,

and what a profit it yields!

It averagesoutlay. on

The Safe and Certain Corn Remover.



125% on outlay.

VIOLIV

is an extremely popular emollient-retailing attractive price. To show VIOLIV ICE in winter time is to make certain of a recommended flow of business.



88 % on outlay.

VIOLIV CREAM

is a cream of very fine texture, a spring and summer line that wins its way to the most exclusive toilet tables.

A business winner!

74% on outlay.



Price Lists Free on Request.

VIOLIV MFG. CO., 26 Haymarket Terrace, Edinburgh

Selling Agents for England, Ireland and Export-PATTINSON & MACKIE, LTD. Albion House, 59 New Oxford Street, LONDON, W.C. 1.





Record Sales Again!

E are glad to announce that Sanatogen sales remain higher than they have previously been at this time of year—a result which we attribute chiefly to increased advertising.

Formamint sales would also be a record but for the abnormal figure reached during the last influenza outbreak.

For **Genasprin** the demand continues to outstrip the supply; but our new plant should be ready by the end of this month, when we hope to rapidly overcome all arrears.

We think that the trade will be interested to hear that new plant for Formamint and Cystopurin is also in course of construction, thus providing for the increased sales which we confidently expect to achieve next Autumn and Winter.

GENATOSAN, LIMITED

(British Purchasers of The Sanatogen Co.)

12 CHENIES STREET, LONDON, W.C.1.

(Chairman: THE VISCOUNTESS RHONDDA).

JOB BROHEBRS

GUARANTEDD PURE RENUINE

NEAMHOLUNDUAND INONEHREEMANG MEDICINAL (COD LIVER OIL

de 1919 de 191

It is perfection in colour, smell, taste and absolute purity. Manufactured from the finest fresh Cod Livers on same day as fish caught

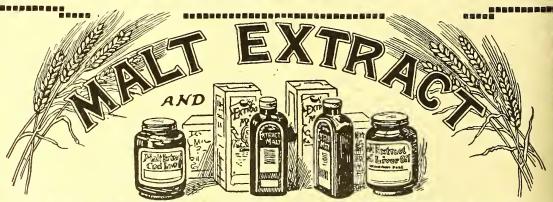
WHOLESALE ONLY

JOB BROS, Manufacturers, Tower Building, LIVERPOOL

Telegraphic Address : "JOB :LIVERPOOL"

Tel.: 1039 CENTRAL

And of ST. JOHN'S, N.F. Established 1780.



Prepared only from the Finest East-Coast Barley, combined with the best Norwegian Non-Freezing Cod Liver Oil.

Packed in Screw-Capped Jars, Bottles and Tins, holding 1 lb, and 2 lb. Neatly Labelled and Wrapped, Customer's Name printed on Labels for Orders of 1 Gross and upwards.

Telephones : Nitshill—Pollokshaws 14 London—Avenue 5661 (3 lines).

PERRY & HOPE, Ltd. "Perryope, Nitshill."

"Perryope, Led. "Perryope, Led. London."

NITSHILL, near GLASGOW.

London Office: 1 LEADENHALL STREET, E.C.3.

8½d. Profit on Every Bottle of ENO You Sell



The ENO Symbol of Happiness.

VERY time you pass a bottle of ENO over your counter—you put 8½d. clear profit into your till. Before the retail price of ENO was protected by the P.A.T.A. your profit was indefinite—but to-day you could not stock a more profitable article.

The persistent and vigorous ENO national advertising is rapidly getting into full stride, and the steadily increasing demand for this unrivalled Health drink proves that ENO is supported by the unwavering confidence of satisfied customers.

Summer time is ENO time—and the next few months will witness an enormous increase in ENO sales. Are YOU ready to participate in the profits created for you by this growing volume of ENO business?

ENO'S FRUIT SALT

"Brings Health to your Customers and Profit to Your Business"

For Trade Terms, Advertising Material, and details of our special window display offer, please write to the SALES MANAGER, J. C. ENO LTD., Blackfriars House, New Bridge Street, London, E.C. 4.

ZAMINI ZAMINE ZASSE ZEAMINE ZAS

The larger size bottle of Eno's Fruit Salt is now placed on the P.A.T. A. list, price 5/- retail. If retailers will kindly advise us of the number of these bottles still in stock, revised price labels will be forwarded to them. We regret, however, that no orders for 5/- size bottles can be accepted until further notice, as the manufacture of this size is at present suspended.

UNBREAKABLE

The "Ferrostat"



BEAUTIFULLY MADE of FINEST STEEL in 2 Sizes

Full Particulars and Prices from Sole Agents



SACCHARINE TABLETS

We were amongst the earliest firms to lay down plant necessary to meet the demands for Saccharine Tablets, and have always kept our old customers fully supplied at favourable prices.

We have never manufactured Tea Sweeteners (so-called) of unstated strength, but have guaranteed a definite strength of Saccharine in every tablet we have offered, consequently the reputation we made we have retained unbroken.

To-day, owing to our large output and favourable buying, we are still enabled to lead where quality is considered with price.

To-day's prices are:

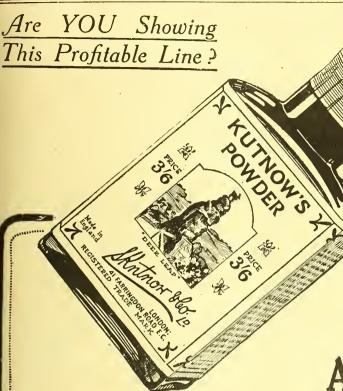
Full strength, 0.3 gr. 550 Saccharine in 1 gr. £2:10:0 per lb. 100's in envelopes 9/- per doz.

Half-strength, 0.15 gr. 550 Saccharine in 1 gr. £1:7:6 per lb.

We solicit inquiries from large buyers in bulk, or from those desiring tablets of any kind compressed from their own material or otherwise.

LLOYD, HALL & PROVAN, Ld. Holoyd Laboratories,

Green Lane, Small Heath BIRMINGHAM.



Sells
on Sight
PRICE **3/6**

Don't Let the Public Ask in Vain

OR a good preparation like KUTNOW'S POWDER it is a wise policy to have the Public say: "Oh! you will be sure to get it at So-and-So's."

People come once, twice, or thrice, but the fourth time they begin to think of going where their wants are supplied—
it is wearisome walking from one place to another.

KUTNOW'S POWDER is a World's Standard Preparation that sells on sight—when shown where the well-known Carton can be seen.

PRESCRIBED FOR ROYALTY

KUTNOW'S POWDER is also a P.A.T.A. Preparation that is continuously advertised in the leading organs of the London, Provincial and Overseas Press.



Sales-Aids willingly supplied—carriage paid direct by

S. KUTNOW & CO., LTD.

The Kutnow Laboratories, 41 Farringdon Rd., London, E.C.1

From all Wholesalers

SAVORY & MOORE, Ltd.

— NEW TERMS —

The Prices per dozen are given in brackets.

```
SAVORY & MOORE'S FOOD . 1/6 (14/6); 2/11 (28/-); 7/4 (70/5); 14/8 (140/10)
Dr. Jenner's Absorbent Lozenges .
                                            . 1/3 (12/-); 3/- (29/-); 5/- (48/-)
PEPTONISED COCOA AND MILK
                                                         2/2 (21/9); 3/6 (35/-)
COFFEE AND MILK (Café Zylak)
                                       (Original Cases contain 48 3/6, or 80 2/2 tins).
PEPTONISED MILK
PEPTONISED MILK CHOCOLATE
                                                       11d. (9/1); 1/10 (18/2)
Magnesia Cordial
                                                         1/3 (12/-); 3/- (29/-)
DATURA TATULA ASTHMA REMEDY (Smoking)
                                                         1/6 (14/6); 3/- (29/-)
                                   (Inhalation)
                                                         2/- (19/2); 3/9 (36/-)
   ,,
                             ,,
                                   (Cigarettes) 3/-(29/-); 6/-(57/9); 8/-(76/10)
APHRODONT (Dental Foam)
                                                                    1/3 (12/-)
                                           3/- (29/-); 5/6 (52/10); 10/- (96/-)
PANCREATIC EMULSION .
FRUCTOL. BROMIDI Co. (Syn. Fruct. Carpinæ Co.)
                   3/6 (33/7); 4/6 (43/2); 6/6 (62/5); 12/6 (120/-).
                                                                 Bulk 4/6 lb.
FRUCTOLE OF RED BONE MARROW AND GLYCEROPHOSPHATES
                                          3/- (29/-); 5/- (48/-).
                                                                 Bulk 4/- 1b.
                                             2/-(19/2); 3/9(36/-); 7/-(67/2)
FRUCTOLAX
```

Assorted orders to the value of £3 net and upwards are sent Carriage Paid. Orders to the value of £6 are entitled to a discount of $2\frac{1}{2}\%$. In both cases there is a discount of $2\frac{1}{2}\%$ for cash with order. Hampers are charged for and credited on return. Payments net, and due on the 15th of the month following dispatch of the goods.

EXAMPLES OF CARRIAGE PAID ASSORTED PARCELS FOR CHEMISTS.

| SAVORY & MOORE'S FOOD JENNER'S ABSORBENT LOZENGES PEPTONISED COCOA AND MILK APHRODONT MAGNESIA CORD'AL DATURA TATULA ASTHMA REMEDY | 1/6 2/11 1/3 3/- 3/6 1/3 1/3 | No. 1. I doz. o 14 6 I ,, I 8 0 I ,, O 12 0 1 ,, O 17 3 | 1 1 074 0 1 1 012 0 | $\begin{bmatrix} 1\frac{1}{2} & ,, & 2 & 2 & 0 \\ 1\frac{1}{2} & ,, & 0 & 18 & 0 \end{bmatrix}$ | 1 ,, 1 8 0 2 ,, 1 4 0 1 ,, 0 14 6 |
|---|--|---|---------------------------|---|---|
| (Smoking) | 1/6 2/- | | 1 1, 0 3 8 1 1, 0 4 10 | = | 1 ,, 0 3 8 1 ,, 0 4 10 |
| Тотац | ••• | 3 4 9 | Discount | 6 II 3 2½ % 0 3 4 | 6 12 · 3 0 3 4 |
| Cash Discount 2½% | | 0 1 7 | 017 | 6 7 11 0 3 2 | 6 8 II 0 3 2 |
| Net | ••• | £3 3 2 | £3 3 8 | £6 4 9 | £6 5 9 |

SAVORY & MOORE, Ltd., Chemists to THE KING, 143 New Bond St., London, W. 1.

It Suits the Chemist's Book



FOR SANAGEN SALES mean 50% Net Profit on Cost, as here shown:

| 4 oz. | Costs 2/– | Sells 3/– | Profit 1/- |
|------------|-----------|-----------|------------|
| 8 oz. | Costs 3/4 | Sells 5/- | Profit 1/8 |
| 16 oz. | Costs 6/4 | Sells 9/6 | Profit 3/2 |

THINK AND PLAN for an Increased Profit Percentage on YOUR Turnover.

TAKE A 50% PROFIT LOOK at your Window and Counter. Move away some of your poor-paying lines and see how your display of SANAGEN will lead to Sales that make you 50% Profit on Cost. And



THE ALWAYS BRITISH NERVE FOOD
IS A SALE-&-PROFIT REPEATER

You can obtain from your Wholesaler.

SANAGEN COMPANY LIMITED, Battersea, London, S.W.11.

Telephone: Latchmere 4363.



GERMOLETS In Tablet form, for Blood and Skin Troubles.

Germolene is Advertised on the same grand scale as Dr. Cassell's Tablets.

Special Introductory Offer:

Small parcels direct by Parcel Post on following terms:—

5% Discount on any quantity of Germolene and Germolets, provided you display Showcards in your window. Also 2½% Discount for Cash in 30 days. Goods carriage Paid.

Large size 30/- per dozen Small , 12/5 , , , Profit 30 % on cost.

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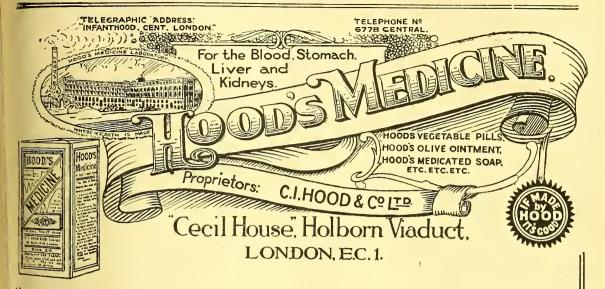
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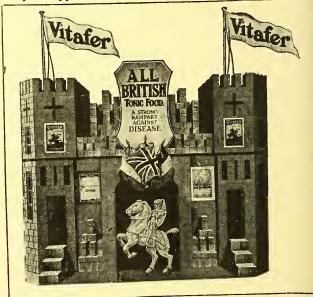
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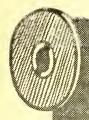
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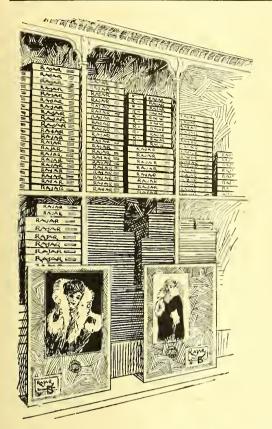
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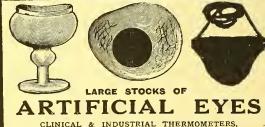
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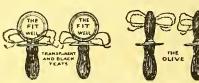


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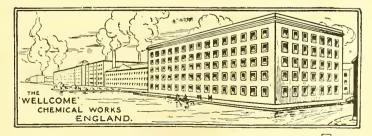
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Volume XCII.

THIS number is the last of Volume XCII., it being our intention to revert to the former practice of issuing two volumes each year. We are preparing an index to the contents of the volume, which will be issued so soon as possible to those of our subscribers who send us postcards asking for copies.

Coming Events.

Wednesday, June 30.

Thames Valley Pharmacists' Association. Motor trip to Windsor. Tickets (including meat tea at White Hart Hotel), 13s. 6d each (for three, 38s. 6d.), from Mr. Alfred Higgs, J.P., 42 Richmond Road, Kingston-on-Thames.

Birmingham Pharmaceutical Association, Queen's College, Paradise Street, at 2 P.M. Motor excursion to Malvern. Tickets (13s. each) from Mr. F. Smith, 221 Soho Road, Birmingham.

Thursday, July 1. Sheffield Pharmaceutical and Chemical Society. Excursion into Derbyshire,

Summary

of the chief items in this issue.

Articles and Communications.

Some distinguished chemists, who began life in a pharmacy, are mentioned in an article on p. 182.

A new "Martindale" is published this week, and we

give an account of a chat we have had with the author (p. 140).

Many years ago we described a visit to the offices of A. & F. Pears, the soap-makers. In this issue we tell of a revisit (p. 186).

A good many pharmacists are interested in book-plates, but the number of pharmaceutical book-plates is few. Some French examples are given on p. 184.

A guide to the motor tour which visitors to the British Pharmaceutical Conference will take on July 22 is given from the pen and camera of Mr. R. Cecil Owen (p. 177).

The report of the Consultative Council on Medical and Allied Services promises to be of historic interest. publish (p. 190) an informative abstract.

The new Norwegian and the Finnish Pharmacopæias, which are now available, are reviewed on p. 146, and attention called to many points of interest in both works.

The question of wages in the wholesale and retail trade is perhaps the chief problem at the present time. expert considers the subject in all its bearings, and concludes that matters can be satisfactorily adjusted by frank conference between the different parties (p. 141).

Liverpool occupies a prominent position in this issue, our aim being to place before our readers the attractions of the city where the British Pharmaceutical Conference is being held next month. Beginning on p. 161, we describe the features of the city, its educational facilities, the wholesale houses, the origin and progress of the Liverpool Chemists' Association, and give some notes about the local chemists and their pharmacies. The illustrations are noticeable, many of the photographs having been specially taken for us by Mr. John Cleworth, President of the Manchester Pharmaceutical Association.

News of the Wrek.

A lecture on helium, which was given before the Chemi-

cal Society, is of great interest (p. 157). Our Town Traveller has started again his peregrinations, which were suspended during the war. In his notes (p. 150) he writes of some of the interesting things he saw, while on p. 153 we tell of other trade novelties.

Trade and Ma ket Matters.

We give a table on p. 196 showing the values of fine chemicals which have been imported into this country during the first five months of the year.

The unique position which cinchona and quinine occupied in enabling the Allies to prosecute the war successfully has been referred to several times in the C. & D.,

but new facts are given in an article beginning on p. 193. Mr. J. H. W. Trumper, who has had several years' commercial experience in Russia, gives his views on future trade with that country, showing how it can be enlarged when conditions again become normal (p. 198).

English and Welsh News.

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C. & D."

The Supply of Rat-poison.

The Devon County Council, at its meeting on June 17, approved an estimate of 250%, for poisons, and it was announced that the inspector, acting under the powers of the Rats and Mice (Destruction) Act, had instructions to prepare and offer for sale suitable poisons at 2s. 6d. and 5s, a tin to persons applying for them. It was added that there was no desire to press intended users of poisons to deal with the inspector in preference to applying to a chemist where a chemist's shop is available, but the chairman suggested that in some places, and in particular in remote country districts, poisons of the right kind are not easily obtained when they are wanted.

"The National Minimum Retail Price List."

Issued as a supplement to "The British and Colonial Pharmacist," the current issue of "The National Minimum Retail Price List" has, in addition to the usual drug and other sections, a dispensing-scale which has been adopted by many chemists' associations. The method adopted for pricing prescriptions is that originally devised by Mr. C. T. Allen, Ph. C. (C. & D., 1919, p. 429). The following are among the alterations and additions: The following are almoing the alterations and additions: Drugs.—Acid. oxalic. (coml.), 5d. oz.; adeps lanæ hyd., $3\frac{1}{2}d$. oz.; alum. ust., 3d. oz.; amylum (rice), $2\frac{1}{2}d$. oz., (wheat), 2d. oz.; ext. casc. sag. liq., 6d. oz.; hennæ fol., 6d. oz.; hennæ pulv., $6\frac{1}{2}d$. oz.; hydrokinone, 4d. dr., 1s. 9d. oz.; menthol, 1s. 3d. dr.; naphthalene (glob.)., $1\frac{1}{2}d$. oz., 1s. 3d. lb.; ol. lavand. (spike), 2s. 2d. oz.; ol. programs 1d. oz., 1d. oz., 1d. oz., 1d. morrhuæ, 4d. oz.; phenazon., 10 gr. 3d.; spt. æther. nit., 8d. oz.; spt. ammon. arom., 7d. oz.; syr. glycerophos. co., B.P.C., 8d. oz. Sundries.—Cotton-wool, 1 oz., 4d., 4 oz., 11d.

Carriage of Weed-killer, Sheep-dip, etc.

The railway companies have recently revised their regulations for conveying Atlas boiler-preservative liquid, dunging liquor, poisonous mordant liquors, liquid sheep-dip, and liquid weed-killer. The packing of these preparations must be in strong, securely closed iron cans or drums, not exceeding 5 gallons in capacity, packed in sawdust in strong wooden cases; in approved iron cans or drums, between 5 and 50 gallons capacity, securely closed so as to prevent leakage. All packages must be branded or marked in conspicuous characters with the word "Poison." The foregoing are not now conveyed in wooden casks, but non-arsenical varieties may be accepted in well-coopered wooden barrels or in strong, securely closed naked iron cans or drums not exceeding 50 gallons in capacity, provided the traffic is for export, is forwarded in full truckloads and is clearly described on the consignment note as a non-arsenical preparation. We understand that a protest has been made by the trade against these new regulations, and that the railway companies are further considering the matter with a view to modification.

House-organs.

The following are among the house-organs that have reached us during June:

"Ensign Messenger" (Houghtons, Ltd., London, W.C. 1) contains particulars of a novel advertising scheme relating to Ensign films. The issue also includes notes on goods and price-changes, together with a list of photo-

graphic publications in stock.
"Camera House Journal" (W. Butcher & Sons, Ltd., London, E.C. 4) contains, in addition to illustrated notes on novelties, an account by Mr. J. E. Hodd, treasurer of the Photographic Dealers' Association, of a visit to the Walthamstow works of the Company. It is expected that an extension of the works will be completed before the end of the present year: the floor-space will then be almost doubled.

"MSS" (S. Maw, Son & Sons, Ltd., London, E.C. 4) has just passed its hundredth milestone, the current issue being "No. 101." When "MSS" first appeared—in April 1911—it was, we believe, the only house-organ in the trade. A simple calculation will show how slight has been the interruption in its regular issue during the war: and it is of interest to note that it is still being printed on the same kind of paper as in 1911. The contents, as usual, hold the reader's attention by the artistic balance

of the spacing.
"Reflections" (The Icilma Co., Ltd., London, N.W. 1),
which has reached the second number of its second volume, is a dainty brochure of twenty-four pages (8 in. × 5 in.). It has grown, we learn, from "the monthly typed letter of four or five sheets" that during the early days of the war was sent from the office of the company to members of its staff serving in any capacity in the struggle for freedom. The contents are a judicious blend of seriousness and humour—a small powder in a large quantity of jam—and the printing is excellent. It is unique (so far as we know) among house-organs in having reached the dignified status of a bound volume, the æsthetic blue cover and gilt edges of which strike a note of distinction. The volume is provided with an index.

Poisonings.

The following cases of fatal poisoning have been re-corded since our last report:

On June 19 two Liverpool children, aged two years and four years respectively, drank some ear-drops containing tincture of opium. As a result the younger child was seized with a fit and died. The seizure was at first attributed to teething. The elder child suffered from sickness and drowsiness, but recovered. The coroner recorded a verdict of "Death by misadventure" at the inquest.

An inquest was held at Grimsby, on June 21, on the body of Lily Johnson, wife of a ship's engineer. A medical witness said that in his opinion death was due to heart failure attributable to the administration of a headache powder, accelerated by a full stomach and heavy clothing. The coroner said he had an analysis of this kind of powder by the British Medical Association, which showed it to contain 6.3 gr. of acetanilide. Ferric oxide and sugar were also mentioned as ingredients. doctor, answering the coroner, said that a dose of 5 gr. had been known to produce collapse. The coroner recorded a verdict of "Death by misadventure."

"The Script" Sports Club.

The first two matches of the team tournament held under the auspices of "The Script" Sports Club (bowling section) were played on June 17. Eastern met Western at Poplar, and Northern played South-Eastern at Wood Green. The home team won in each match, Eastern by the narrow margin of 5 points and Northern by 38 points. Play was as follows:

| I lay was as follows: | | |
|--|--|-----|
| Eastern. | No. 1 Rink. | |
| Lawrence, W. H. Abelson, B. Styles, A. Keith, A. R. (skip) | 18: Feltwell, J. W. Procter, H. R. Dawson, Theo. James, J. M. (skip) | 15 |
| | No. 2 Rink. | |
| Wood, W. Whitehead, H. J. Main, W. Wilson, G. M. (skip) | Rowe, A. Duncan, A. Wilkinson, W. Widgery, J. (skip) | 22 |
| • * * * * * * * * * * * * * * * * * * * | | 70 |
| | 42 | 37 |
| | | |
| Northern. | South-Eastern. | |
| NORTHERN. | South-Eastern. No. 1 Rink. | |
| NORTHERN. Bowie Bennett Perrett Grassick | | 16. |
| Bowie Bennett Perrett | No. 1 Rink. Milner Foster Ralph Siddle | 16. |
| Bowie Bennett Perrett | No. 1 Rink. Milner Foster Ralph | 16. |
| Bowie Bennett Perrett Grassick McRostie Houiatt Rawlins | No. 1 Rink. Milner Foster Ralph Siddle No. 2 Rink Sayers Wing Foulsham Additional Sayers Sayers | |

Poisoned-chocolate Mystery.

At York, on June 22, the magistrate began the hearing of a case in which Thomas Liddle (fifty-nine), farmer, is charged with administering chocolate containing strychnine, with intent to murder, to John Raper Thompson, and with attempting to do so with the same intent to Ernest Ralph Dodsworth, Francis Holmes, William Thomas Rust, and Robert James Walker. Counsel for the prosecution stated that the facts relied upon by the prosecution were that, following a will suit in March, and the finding that a will propounded by Liddle was a forgery, the persons mentioned in the charges received by post envelopes, the addresses being in printed handwriting, each of which contained chocolates wrapped in telegraph forms. Mr. Thompson, one of the recipients of these chocolates, innocently ate one of them, with the result that he at once exhibited signs of strychnine poisoning. Others of the recipients fortunately threw the chocolates away. The chocolates Mr. Dodsworth received were found to contain 0.23 gr. of strychnine each, and those Mr. Rust received 0.51 gr. each. On the premises of the accused had been found a tin containing decomposed meat, an analysis of which established the fact that it contained strychnine, and that the accused had strychnine in his possession. It was assumed that the poisoned meat was used for the purpose of poisoning vermin. The hearing was adjourned.

Birmingham.

Dragon's blood as a charm has cropped up again locally.

A pharmacy window at King's Heath, filled with vacuum flasks at 4s. 9d. each, is proving an attraction.

Dispensers in the retail are offered 50s. a week; workers in the wholesale receive 65s. weekly for a less number of hours.

Miss Doris M. H. Alcock, daughter of Mr. F. H. Alcock, F.I.C., Ph.C., has secured honours (Class III.) at the Cambridge classical tripos examinations, taking Greek and Latin. Her sister, Miss Vera J. Alcock, also secured a first class in the science examinations at the same University, taking chemistry, physiology, and botany. Both are students at Girton College.

At a meeting of the Birmingham Rexall Chemists' Club, on June 16, Mr. C. E. Ison (Atherstone) was elected President, Mr. A. S. Prier (Blackheath) and Mr. A. F. Goode (Erdington) Vice-Presidents, and Mr. H. H. Marshall (Moseley) secretary. It was mentioned that the following members would represent the local club at the United Drug Convention in America next September: Councillor Jeffrey Poole, Mr. W. H. Lester (Nuneaton), Mr. F. D. Spencer (Stratford-on-Avon), and Mr. J. W. Atkinson (Aston).

Liverpool.

The heat-wave has brought the sale of salines to the front, and has started the demand, always a little late in the North, for bathing-requisites.

Professor I. M. Heilbron, D.S.O., D.Sc., Ph.D., was appointed to the chair of organic chemistry at a meeting of Liverpool University Council on June 22.

Opinion is gaining ground that the elasticity allowed in the working of the Shops Act at Southport and other watering-places ought to be extended to passenger ports.

Mr. A. W. Ashcroft, Aigburth Road, took part in the "old boys" reunion at Ashville School, Harrogate, on June 19. Mr. Ashcroft called on a number of Harrogate pharmacists during a week-end stay.

Tributes to the excellence of the programme for the British Pharmaceutical Conference week are flowing in from all quarters. Applications for tickets for friends outside pharmacy have had to be declined.

A few days ago a lad residing at Garstang was cycling in the country when he was struck by a motor-car proceeding in the direction of Preston, and driven by Mr. Thomas Burnett, chemist and druggist. West Derby Road, Liverpool. The boy sustained a compound fracture of the right leg and other injuries.

Manchester and District.

A proposal is on foot to hold an International Exhibition in Manchester, either next year or in 1922.

Miss Sargent, chemist and druggist, has recently acquired the Stretford Road branch of J. L. Smith, Ltd.

Manchester Pharmaceutical Association has now twolady members, each of whom is qualified and in business on her own account.

Several chemists have recently received notices to quit their business premises in six months' time. This is apparently an intimation that there will be an increase in rent.

Mr. Walter Uttley, chemist and druggist, has recently acquired from Halls, Ltd., two pharmacies in Princess Road. One of these (No. 96) was established by Mr. E. F. W. Thorp. Mr. Uttley sold his business at Longsight some time ago (C. & D., 1919, p. 1427).

Sir William Veno, governing director of the Veno Drug Co., Ltd., entertained his fellow-directors and the administrative staff to a dinner at the Grand Hotel on June 14. The toast of "Sir William and Lady Veno" was enthusiastically received with musical honours. Sir William is sailing on the Walmer Castle on July 2 to Cape Town, on business connected with the company's branch in that city.

Miscellaneous.

Special Closing day for Banks.—It is understood that July 1 will be proclaimed as a closing day for banks. It will not be a Bank holiday in the ordinary sense of the phrase.

Sales of Fixtures.—Mr. L. W. Williamson, Ph.C., High Row, Darlington, recently disposed of his shop fittings by auction.—The shop fittings, fixtures, and effects of the pharmacy at 9 Hyde Park Corner, Leeds, are to be sold under a deed of assignment.

The Port Sunlight Strike.—The employés of Lever Brothers, Ltd., returned to work on June 21. The workers are to be reinstated as the process of work allows, but lose their participation in the copartnership and other voluntary schemes.

THEFT OF OPIUM.—Ten cases of opium, valued at 1,700%, the property of the Port of London Authority, have been stolen from a warehouse in the Isle of Dogs. The cases were of wood, bound with iron, measuring 1 ft. 1 in. by 1 ft. 7 in. by 2 ft. 10 in., and bore the mark "S.S. Turkey."

Society of Chemical Industry.—It is proposed to raise the subscription from 30s. to 50s., as from January 1, 1921. The change is necessitated by the increase in printing charges and the desire to retain the present standard of the Society's "Journal." The annual meeting will be held at Newcastle-upon-Tyne, beginning July 13.

BRITISH MEDICAL ASSOCIATION.—The eighty-eighth annual meeting will begin at Cambridge on June 25, when the representative meeting will be held in the Examination Halls. Sir Clifford Allbutt will deliver his presidential address in the Senate House on June 29, and the scientific sections will meet in the New Museums on June 30, July 1 and 2, the mornings being devoted to discussions and the afternoons to laboratory and clinical demonstrations.

Fires.—The following outbreaks of fire have been recorded since our last report: On June 17, at Adcocks. Drayton Park, London, N.5, a fire was caused by a quantity of disinfectant boiling over. About 100 gallons of disinfectant was destroyed.—An outbreak occurred on the premises of Ralph Hall, Ltd., chemists, 552 Kingsland Road, London, E.8. The damage, which was slight, is believed to have been caused by a spark from a railway engine.

PROPRIETARY MEDICINES.—An appeal is being made to members of the Owners of Proprietary Articles Section of the London Chamber of Commerce for contributions to the expenses of the Special Committee which is acting with the Association of Manufacturers of British Proprietaries in protecting the interests of manufacturers.

It is estimated that 5,000*l*. will be required, of which 2,000*l*. has been guaranteed by the Association. Donations are asked towards the further amount needed.

Protest Against Excess Profits Duty.—Speaking at the annual meeting of the National Union of Manufacturers, held at Cannon Street Hotel, London, recently, Mr. George Terrell, M.P., said that manufacturers had reason to believe that the duty would be abolished, and they were amazed when it was raised from 40 to 60 per cent. The Chancellor of the Exchequer had said the tax was necessary, but if he thought that he was bankrupt of ideas. If the tax was abolished it would give an impetus to industry which would more than compensate for the loss of revenue. Mr. Terrell suggested that Government Departments which only exist for spending money should be cut down. Manufacturers must put up a fight.

Forged-prescriptions Charge.—At Marlborough Street Police Court, London, on June 18, the hearing of the case in which Ellen D. Battiscombe is charged with having uttered forged prescriptions (C. & D., June 19, p. 39) was resumed. Mr. Pearce, who appeared for the Public Prosecutor called a number of chemists carrying on business in the West End, who deposed to receiving letters signed "Battiscombe" enclosing prescriptions purporting to be signed by doctors and asking that they should be nade up and sent to her. Dr. H. R. Wadd, Richmonl, Surrey, and Dr. Rolph Creasy, Grafton Street, W., were handed several prescriptions in court, and stated that they did not bear their signatures. They had attended the prisoner. Mr. Walter Frampton, for the defence, said that the accused would plead "Not guilty," and would reserve her defence. She was committed for trial.

In the Courts.—At Woolwich Police Court, on June 16, Joseph H. Johnson, stevedore, was charged with breaking and entering into the shop of Mr. Arthur Goldthorpe, chemist and druggist, 152 Plumstead Common Road, S.E. 18, and stealing twenty-five cameras, value 39!. Evidence of arrest having been given, Mr. E. R. Turner, assistant to Mr. Goldthorpe, said that the premises were secured on the night of June 8. On the following morning the place was found in disorder. Johnson, who said he knew nothing of the theft, was committed for trial, bail being refused.—At Fleetwood Police Court, recently, four lads were charged with the theft of cold-cure tablets from the shop of Boots, Ltd., Lord Street. Two of the boys were discharged, and the others were bound over.—At Llanelly Police Court, on June 17, Harold Greenwood, solicitor, Kidwelly, was charged with the murder of his first wife (C. & D., June 19, p. 38), and was remanded in custody.—At East, Ham Police Court, on June 17, a Chinese seaman was fined 20l. for being in the unauthorised possession of 14 oz. of opium.—At West Ham Police Court, on June 22, Frederick Harrington, labourer, was sentenced to seven days' hard labour for being in unauthorised possession of "24" oz. of cocaine and 100 gr. of opium."

Irish News.

Brevities.

Mr. W. C. Harvey, compounder to the Clonmel Guardians, has resigned his position. The question of his superannuation is shortly to be considered.

On June 21 the premises of the Cork Chemical and Drug Co., 103 Patrick Street, Cork, were forcibly entered, and goods to the value of 10l. stolen. The cash-till,

containing over 1t., was also cleared.

"A Plucky Chemist" is the "Times" heading to a paragraph in an account of the riots at Londonderry on June 21. The "Times" correspondent writes: "Sinn Feiners assembled in force in Waterloo Place and held up Unionist workers returning from the shipyards. There were several ugly rushes and five shots were fired at a man, who was wounded in the legs. A chemist whose

shop is opposite bravely stepped out, and, holding up his hand to the crowd, assisted the wounded man in and dressed his wounds. The man was afterwards conveyed through the crowd to the infirmary in a jaunting car. Doctors and chemists, by the way, are the only people who have any semblance of business to-day."

Dr. McWalter's Garden Party.

The High Sheriff of Dublin, Dr. J. C. McWalter, who was recently elected chairman of the Dublin branch of the British Medical Association, gave a garden party to members of the medical and pharmaceutical professions on June 17, at the Zoological Gardens, Dublin. The principal physicians, surgeons, and pharmacists of Dublin were present, and the new Chief Secretary, Sir Hamar Greenwood, and Lady Greenwood made their first appearance at any public function in Ireland on this occasion. The Lord Chancellor, the Lord Chief Justice, the Recorder, the President of the Royal College of Physicians, the Governor of the Apothecaries' Hall, the Vice-President of the Pharmaceutical Society, the President of the Irish Medical Association, Sir Robert and Lady Tate, Mr. W. J. and Lady Smythe, Sir Joseph and Lady Glynn, Sir Thomas and Lady Myles, Sir John W. and Lady Moore, Sir Arthur and Lady Chance, Sir Andrew and Lady Beattie, Mr. J. Smith, Dr. Walsh, Mr. Hanna, Mr. Lee, and other members of the Pharmaceutical Council were among those who accepted the invitations, together with prominent members of the Bar and representatives of the Churches and the Arny. The band of the Hibernian Military School attended, and an army of photographers and lady journalists sought to snap prominent figures. The French Press was represented by Captain Negre, of the "Echo de Paris."

Scottish News.

Brevities

Chemists' printers are so busy that delay in executing orders is almost inevitable.

Mr. F. C. Greig, chemist and druggist, has acquired a business in Bridge Street, Wick.

Mr. David W. Kay, chemist and druggist, is opening a pharmacy at Tam's Brig, Ayr.

A number of chemists who formerly eschewed the photographic business are coming into line.

Scotland is at present enjoying a spell of particularly fine weather. Salines, soaps, tooth-pastes, and the usual holiday requisites are in demand.

Considerable doubt exists in the minds of many Rexallites as to their position under the imminent Anglo-American combine. Rightly or wrongly, there is a feeling of anxious uncertainty.

Mr. Alexander Simpson, chemist and druggist, Alloa, who had to leave his shop at 45 Mill Street, although willing to pay increased rent (C. & D., March 20, p. 49), has removed to premises in the same thoroughfare.

A Scottish chemist recently received a consignment of bottles, the balance of a 1918 order, which had been entirely forgotten. The price, of course, is not that of 1918, and the chemist is now cancelling all balances of orders of every description. "Once bit, twice shy."

Sir John Herkless, D.D., LL.D., principal of St. Andrews University, died in a nursing home recently. Sir John was a professor in St. Andrews for twenty-one years, and its principal for five years. He was chairman of the Fife County Insurance Committee from 1913 to 1915.

Referring to the new rates of insurance under the National Health Insurance Act, 1920, which come into force on July 5 (C. & D., May 29, p. 49), Mr. Jas. Lennox, President of the Chemists' Friendly Society, sends us a copy of a leaflet which has been issued explaining the charges. Copies of this can be obtained from the Society, 194 St. Vincent Street, Glasgow.

Aberdeen.

The dispute between the Northern Co-operative Society and the Aberdeen Branch of the Shop Assistants' Union, over the question of the recognition of the Amalgamated Society of Pharmacists, Drug, and Chemical Workers, has caused considerable interest in the lay Press during the past few days. The contention of the officials of the Shop Assistants' Union is that the Pharmacists' Society is not a recognised trade union. In July 1917, they gets the directors of the recognised trade union. they state, the directors of the Co-operative Society agreed that all distributive employés should be members of the Shop Assistants' Union, or leave the employment of the Society. The position taken up by the directors is that the present crisis is apparently a quarrel between the Shop Assistants' Union and the Amalgamated Society of Pharmacists, Drug and Chemical Workers, and a matter over which they have no control.

Edinburgh.

Chemists are acting as collectors of subscriptions for the Royal Infirmary.

Representatives of several education authorities met the governors of George Heriot's Trust recently to consider the maintenance of the Heriot-Watt College and its develop-

Dr. D. Berry Hart, a well-known local physician, died at his Edinburgh residence recently. Dr. Hart, who gained his M.B. in 1877, worked under the late Lord Lister for some years.

The explosion of a benzene still at the Sowler Fine Chemical Laboratories on June 20 resulted in the two men who were attending to it being severely burned. The building was badly damaged.

The twenty-fifth annual meeting of the Edinburgh Pharmacy Athletic Club took place at the Powderhall grounds recently. The majority of the events were confined to the trade. There was a large crowd, ladies predominating.

A local chemist who charged 1s. 6d. for a mixture, the suggested rate in the Scottish Chemists' Retail Price-list, was astonished to hear that a brother pharmacist not very far away had given the medicine away for 10d. Naturally, the customer wanted some explanation.

Fife.

Kircaldy assistants recently had an outing to Glenfarg. A letter has been sent to pharmacists by the Fife county council stating that posters are being prepared warning occupiers and owners of premises of their obligations under the Rats and Mice (Destruction) Act, 1919, and giving the names of pharmacists who have approved poisons for sale.

" Riding the Marches."

Mr. William W. Spence, chemist and druggist, Linlithgow, Deacon of the Fraternity of Dyers, entertained a



MR. W. W. SPENCE,

large number of members to a breakfast at his residence in Linlithgow, and subsequently to a luncheon at his sister's residence, Lowvalley House, Blackness, at the annual ceremony of "riding the marches" on June 15.

Among the guests were
Messrs. G. Coull, Ph.C., A.
Spence, E. Spence, J. Wilson
Dougal, B.Sc., and Dr. Hamilton Polmont. Apologies for absence were received from Mr. J. Rutherford Hill, Ph.C., Bailie Sinclair (Falkirk), and Mr. Thomas Ridley, Mayor of Carlisle. The

Fraternity of Dyers, which is the pioneer friendly society in Scotland, has for its motto "We Dye to Live, We Live to Die." The suspension of the ceremony during the war has apparently brought about a revival of public interest in it: on this occasion the number of sightseers was estimated at between 20,000 and 30,000.

Pharmaceutical Society of Great Britain.

North British Branch.

A MEETING of the Executive of the North British Branch was held at 36 York Place, Edinburgh, on June 16, Mr. James Jack in the chair. There were present: Messrs. James Jack in the chair. There were present: Messrs. Arthur, A. Currie, W. L. Currie, Forbes, Gilmour, Glass, Guthrie, Jack, Kitchin, McEwan, Mackenzie, McMillan, McNab, Meldrum, and Murray.

THE LATE MR. COWIE.

The Chairman said he had to refer to the great loss they had sustained since the last meeting through the untimely death of their colleague, Mr. W. B. Cowie. Mr. Cowie was not in good health even at the last meeting, and had been medically advised that if he did attend the meeting he should refrain from taking any active part in the proceedings. Nevertheless, Mr. Cowie not only attended, but was able to take part in the keen and active way in which he was accustomed to participate in the proceedings and work of the Executive. He moved that they record in the minutes their appreciation of Mr. Cowie's services as a member of the Executive and in many other ways, and their deep sense of loss by his death.

The Vice-Chairman seconded the motion, which was

unanimously adopted.

A report was submitted of a joint meeting of the Committee for Nomination of Examiners, the Examinations Committee, and the Allocation Committee, held on May 12, which dealt with a difficulty in regard to the holding up of training grants and allocations owing to the erroneous impression that all the training institutions in Scotland were full; candidates and choice of examination centres, being a proposal to examine students in London or Edinburgh irrespective of any wish expressed by the candidate; nomination of additional examiners to act as a reserve in case of emergency; arrangements for July examinations; the allocation of students and the recognition of training institutions; revision courses of study; the position of students studying prior to the new regulations; the report of the Council's Ministry of Health Committee on the regulations and the reconstruction of the Major examination. After discussion, the joint report was unanimously approved.

Annual Meeting.

The annual general meeting of the members of the Society resident in Scotland was held afterwards. Mr. James Jack was in the chair, and delivered a speech summarising the work of the Executive Committee during the year.

THE SCRUTINEERS' REPORT

was then received. This stated that 1,206 voting papers were issued and 462 returned, thirteen being informal. The following candidates received a majority of votes:

Arthur, Harvey Phillips Currie, Archibald Fisher, John Hutchison Forbes, John Johnstone Gilmour, David Glass, William Stephen Irvine, Malcolm Miller Jack, James Kitchin, George Shiach

McEwan, Arthur Mackenzie, Thomas McLaren, James Bryce McMillan, Anthony McNab, Walter Girdwood McVitae, John Brough Meldrum, Martin Murray, Alexander Russell, James Anderson

The list includes eighteen names, there being an equality of votes for John Hutchison Fisher and James Anderson Russell. The chairman decided by casting lots and the choice fell on Mr. Fisher, who was accordingly declared elected.

Votes of thanks were given to the scrutineers. Thereafter a warm welcome was given to Mr. J. P. Gilmour, editor of "The Pharmaceutical Journal," who was formerly chairman of the Executive Committee. The chairman was also thanked for his conduct in the chair.

The Profiteering Act.

Notes.

CHAMBER OF TRADE'S PROTEST.

Arising out of a case heard on June 4, the respondent being Mr. F. G. Walton, chemist and druggist, Darlington, and the case being dismissed (C. & D., June 12, p. 54), the local chamber of trade subsequently passed unanimously, having regard to the nature of the case, a resolution of protest. A reply has been received from the town clerk suggesting that the Profiteering Committee acts increly in a judicial capacity.

PROFITEERING COMMITTEE ASKED TO RESIGN.

Lambeth Borough Council has asked the members of the local Profiteering Committee to tender their resigna-tions forthwith, and has decided, in the event of their doing so, not to appoint a fresh Committee. They have met nine times, heard fifty-nine complaints, and ordered a total of 10s. 8d. to be refunded to various complainants. Two tradesmen have been prosecuted for profiteering, and both cases have been dismissed. The town clerk has pointed out that the Committee is a statutory one, and that it is not within the province of the Council to dissolve it.

GOVERNMENT OFFICIAL EXPLAINS.

At a recent sitting of the Kensington (London) Profiteering Committee, the chairman announced that Captain Wells, an inspector appointed by the Board of Trade under the Profiteering Act, was present, and would answer questions put by members of the Committee. In the course of the discussion which followed, Captain Wells said that a trader could be dealt with who made an unconscionable bargain. The Chairman: Under common law? Captain Wells: Yes, under common law; but we have not had a case in which such a huge profit was found to have been made. A Member: If a trader before the war was getting a certain rate of profit, competition kept him from making an excessive profit. You cannot treat all traders as criminals.

Appeal.

The Dublin Appeal Committee, at a recent sitting, allowed the appeal of Mr. R. J. Doyle from the decision of the Dublin Profiteering Committee, dismissing his complaint against Hamilton, Long & Co., Ltd., who had charged him 4s. 4d. for a mixture (C. & D., May 22, p. 89). Mr. Clery (instructed by Mr. Lemass) appeared for Mr. Doyle; and Mr. Swayne, K.C. (instructed by Messrs. Hayes & Sons), for Hamilton, Long & Co., Ltd. The transcript of the notes of evidence taken at the hearing of the complaint by the Profiteering Committee was produced. The complainant was examined, and stated that since the original hearing he had sent the prescription to Messrs. Boots, Liverpool. They charged him 1s. 6d. for making up the prescription and 7d. for the postage of the mixture. Dr. Mitchell, a director of Hamilton, Long & Co., Ltd., gave evidence similar to that given by him before the Profiteering Committee. Mr. W. F. Wells, Ph.C., a member of the Council of the Fharmaceutical Society of Ireland, stated that he considered the price charged in this case a fair one, and one that would be charged by all highclass chemists in Dublin. There was now a lower percentage of profit on dispensing than there had been with pre-war prices. The Dublin chemists adopted the old apothecary system of scale charges according to size of bottle, number of doses, and so on. To take the actual time that each prescription took to make up would require an assistant with a stop-watch. Replying to a, question as to the price charged by Messrs. Boots for the prescription in the present case, Mr. Wells said that houses like Messrs. Boots only used dispensing as a catch for drawing the bigger business that they did in other departments, out of which they made a big profit. only kept open for limited hours. A chemist could not live or dispensing alone. If the chemists had to reduce their charges it would put an end to high-class dispensing. Dr. J. A. Walsh, Ph.C., proprietor of Graham & Co.,

30 Westmoreland Street, and also a member of the Council of the Pharmaceutical Society, stated that he was not present when his assistant was asked the cost of making up the prescription in the present case and said it would be about 3s. 6d. He knew that this was the prescription about which proceedings had been taken, and he feit nervous about stating a definite sum. (Laughter.) The chairman (the Recorder) said the dose in this case was a teaspoonful, and there were forty-eight doses in the bottle. He asked how much witness would charge if the dose were two tablespoonfuls. Dr. Walsh replied that he would charge 2s. 4d. He considered it was immaterial to a patient what the ingredients cost, because it was for the cure he paid. The Recorder, in giving the decision of the Appeal Tribunal, said he know the respondent firm well, and they only supplied the very best drugs. But the Tribunal considered that the charge in the present case was excessive, and that 2s. 9d. would be a reasonable charge. They directed that the defendant company should refund to the complainant the difference between that sum and the sum he had paid asked for costs. The Recorder said the Tribunal had no power to give costs, but he suggested that Hamilton, Long & Co., Ltd., should pay the complainant's costs. Mr. Swayne, K.C., expressed the willingness of his clients to pay 6l. 6s. costs. them. They would not order a prosecution. Mr. Clery

Complaints.

ACTON.—At the sitting of the Profiteering Committee on June 18, the hearing of the case in which a complainant alleged that on going to a local branch of Boots, Ltd., to get a prescription made up for a panel patient she was charged 4d. for the bottle, and was told that the money could not be refunded (C. & D., May 22, p. 89), was concluded. The chairman informed Messrs. Boots' legal representative that, as the alleged offence was one committed against the Insurance Act regulations, it would be dismissed so far as profiteering was concerned. Complainant would, however, be advised to clean the bottle and tender it to the firm.—At the same sitting, a complainant stated that on May 19 Mr. J. E. Alcock, Ph.C., Churchfield Road, charged him 1s. 6d. for a small quantity of white vaseline, whereas the proper price, according to another chemist, was 1s. 1d. The respondent, through his solicitor, admitted that he had made a mistake, due to hurry. Estimating the jar in question to contain 3 oz., and find ng on referring to two lists that the price of white vaseline was from 3s. 4d. to 3s. 6d. per lb., he charged 9d. for the vaseline, 3d. for the jar, and 6d. that the jar contained only $2\frac{1}{2}$ oz. by weight, and he was ready to return 4d. So small was the demand for white vaseline that the 1-lb. tin of it on the premises when he took over the business in 1915 had not yet been exhausted. The Committee ordered respondent to refund 4d., and the chairman added that it had been decided "to move for a prosecution.

CHELSEA.—At the sitting of the Profiteering Committee on June 17, the hearing of a complaint against Bennison's, Ltd., chemists, 8 Cale Street, S.W. (C. & D., June 12, p. 53), was concluded. The case had been adjourned from the previous hearing for the production of price-lists and invoices. Mr. McIntyre, for the respondents, said they could not produce an invoice, and the only price lists were those of February 5 and June 16. The complaint was dismissed.

ROMFORD.—At the sitting of the Profiteering Committee on June 18, Revill's Drug Stores, Ltd., Horn-church, were the respondents in a complaint of having sold a bottle of Fellows' Syrup at an excessive price The complainant stated that the price "8s. 6d." was marked on the outside label, but only "4s. 9d." inside. Mr. Revill, for the respondents, said he must admit that he had made a big mistake. It was decided not to prosecute, but to give the respondents a severe warning.

Westminster.—At the sitting of the Profiteering Committee on June 21, a case in which saccharin tablets were alleged to have been sold at an excessive price at a Strand pharmacy was adjourned, the complainant having written to say that he

was called away for a month.—At the same sitting, a complaint was heard which appeared in the official list as follows: "Charging $6\frac{1}{2}d$. for 'less than 1 oz.' of boric acid powder and $4\frac{1}{2}d$. for 'about $1\frac{1}{2}$ oz.' of Glauber salts." The respondent was Mr. Benjamin Barnato, 5 Soho Street, W. 1, who was understood to say that he had a medical qualification. At the outset of the hearing he unsuccessfully made an application for the summons to be amended, on the ground that his sealed packets were not sold by weight. Evidence of purchase having been given by the complainant, the chairman sent for a pair of scales, and the packets were weighed, Mr. Barnato humorously sug-gesting that the weights before the Committee were troy weights. In reply to the chairman, the respondent said that he purchased the boric acid at the rate of 2s, per lb. There was about 2 oz. in the carton, which carton, together with the label and a gold seal, cost 1d. Prior to the war, he could buy boric acid at 3d, per lb., and sold it at 3d, per oz. He produced a price list of Allen & Hanburys, Ltd., and another one, but stated that he was unable to show any invoices, these having been destroyed. His gross profit he estimated at 50 per cent., and his net profit at 17 per cent. Mr. Barnato put in figures relating to his profits for three years. He further urged that on such articles as Zambuk there was a profit of not more than 5 per cent., and that loss must be allowed for in the case of Glauber's salt, which, on exposure to air, went to "magnesia." The Chairman: Magnesia! The Committee ordered a refund of 2d, on the boric acid and a refund of 11d, on the Glauber's salt. The complainant having unsuccessfully asked for costs, the respondent laid 4d. in front of him, remarking that there was a halfpenny towards his expenses, and that his (respondent's) time was worth a guinea a minute.—At the same sitting, a complainant stated that he regarded a charge of 1s. 6d. made for a tooth-brush at the pharmacy of Mr. Joseph James, 18 Wilton Road, S.W. 1, as excessive. Mr. C. H. Kirby (Neve, Beck & Kirby) appeared for the respondent. Evidence of purchase having been given, Mr. Kirby explained that the brushes in question cost 10s. per doz., yielding a gross profit of 44 per cent. on sale. Prior to the war Mr. James had purchased similar brushes from Titterton & Howard at 6s. 6d. per doz., retailing at not less than 1s. each. Mr. Kirby put in a letter to that effect. Mr. Frederick George Cook, manager to the respondents, giving evidence, stated that brushes formerly bought at 96s, a gross were sold at 1s, or 1s, 3d, each, those bought at 80s, a gross were charged 9d, each, and those costing 60s, a gross retailed at 6d, each. The chairman pointed out that these figures did not support the contention that the respondent's present profit did not exceed his pre-war profit. Some discussion followed as to whether tooth-brushes were a part of a chemist's regular trade, and Mr. Kirby mentioned that in the Trade Marks Act they were classed as perfumery, his submission being that a higher rate of profit might be allowed on such parts of a chemist's trade than on more ordinary lines. chairman announced that the Committee considered 1s. 3d. a reasonable price for the brush in question, and ordered a refund of 3d.

Prosecution.

At Ealing Police Court, on June 22, the Ealing Profiteering Committee summoned Mr. Arthur Armitage for selling 6 oz. of cod-liver oil for 2s. 3d. (C. & D., June 12, p. 54). The magistrates, after hearing the solicitor for the prosecution, and without asking for any evidence for the defence, decided that the Profiteering Committee were quite outside their rights in opening up the case again. The chairman said that it was a case that should never have been brought before them, and that they had decided to dismiss the case and to award 3l. 3s. costs.

The Utilisation of Seaweed.—During the war Professor Sauvageau, of the Bordeaux Faculty of Sciences, was invited by the Inventions Board to collect information as to the utilisation of seaweed. The researches have now been published in a treatise of 400 pages. The different decrees issued in France regarding seaweed collection, the mechanical processes employed in America, etc., are included in the volume.

New Companies and Company News.

P.C. means Private Company and R.O. Registered Office.

James Stewart (London), Ltd. (P.C.).—Capital 2,000l. Objects: To carry on the business of factors and agents to a number of businesses, including chemists. R.O.: 15 Great St. Helen's, London, E.C.

Baburizza & Co., Ltd. (P.C.).—Capital, 50,000l. Objects: To carry on, among other businesses, that of chemists and dealers in drugs and chemicals. R.O.: Devonshire Chambers, 146 Bishopsgate, London, E.C.

EVERTON CHEMICAL Co., LTD. (P.C.).—Capital, 3001. Objects: To carry on the business of chemists, druggists, chemical manufacturers, etc. The subscribers are D. T. R. Smith, 35 Macklin Street, Derby, chemist, and W. McLean, 125 Osmaston Road, Derby, chemist. Solicitor: E. M. Gowen, 81 Dale Street, Liverpool.

Barnes, Pearson & Long, Ltd. P.C.).—Capital, 1,000/. Objects: To carry on the business of chemists, druggists, drysalters, oil and colour importers, etc. The first directors are: S. Barnes, Bradford Road, Stanningley, near Leeds; J. O. Pearson, Farfield, Farsley, near Leeds; and H. W. Long, Kettlewell, viá Skipton. R.O.: Varley Street, Bradford Road, Stanningley, near Leeds.

Curene, Ltd. (P.C.).—Capital, 100/. Objects: To

Curene, Ltd. (P.C.).—Capital, 100l. Objects: To carry on the business of manufacturing chemists, manufacturers of and dealers in preparations and remedies for hæmorrhoids and eczema, etc. The provisional directors are: A. E. Crutchley, Baylie Street, Stourbridge, manufacturing chemist, and S. R. James, Addiscombe, accountant. R.O.: 1 Churchten Street, Westminster.

VIVIAN SOAP CO. (ROCHESTER), LTD. (P.C.).—Capital, 6,000!. Objects: To carry on the business of manufacturers of concentrated soap-powders and soap, dealers in oils and oleaginous and saponaceous substances, manufacturing and general chemists, druggists, etc. Agreement with F. V. Steed. First directors are: F. V. Stead and L. O. Atkins. Solicitor: C. B. Lumley, 130 Strand, London, W.C.

Chemicals Import Co., Ltd., of Swiss Industrials.—Particulars filed June 7 under Section 274 of the Companies (Consolidation) Act, 1908. The company is also known as the "Chemie-Import A.-G. Schweiz. Industrieller" in Zurich; the "S.A. Industriels Swisses pour l'importation de produits chimiques," and the "Soc. an. d'Industriali Svizzeri per l'importazione di prodotti chemici." It was incorporated in Zurich, the "statutes" being adopted on November 29, 1918. The objects are: To buy and sell raw materials and ready-made articles, both on commission and for own account, etc. Original stock: 2,000,000 francs in 4,000 shares of 500 francs each. Only persons and firms domiciled in Switzerland, registered in the Commercial Register, and connected with industry can become shareholders. British address: Chiswell House, 133-9 Finsbury Pavement, London, E.C., where Hans Steiner, manager, is authorised to accept service.

CASTNER-KELLNER ALKALI Co., LTD., have declared an interim dividend at the rate of 20 per cent. per annum for the six months ended March 31, 1920. A year ago the dividend was at the rate of 12 per cent.

COMPANY WHICH MAY BE WOUND UP.—Chemicals and Saccharin, Ltd., will, unless cause is shown to the contrary, be struck off the register and the company dissolved three months after June 11.

British Cyanides Co., Ltd.—The directors have declared a dividend of 10 per cent. per annum (1s. per fully-paid share), free of tax, on the ordinary shares for half-year, payable June 24, making 10 per cent. for year.

G. B. Kent & Sons, Ltd., have declared the usual dividend at the rate of 5½ per cent. per annum upon the cumulative participating preference shares for the six months ended March 31, 1920, due and payable on July 1, and an extra ½ per cent. for the year ended September 30, 1919.

Legal Reports.

A Dismissal Dispute,—In Uppingham County Court, recently, Henry Webb Browning, 37 Grove Road, Ramsgate, chemist's assistant, sued Mr. Cornelius Bayley, chemist and druggist, Uppingham, for 16l., being one month's wages in lieu of notice. Plaintiff, it was stated, was employed by Mr. Bayley until the end of August 1919. Browning was given a month's notice, but he stayed on for some time. The defendant, who had been away ill, returned, and intimated that plaintiff's time expired in about a week. Mr. Bayley stated that at plaintiff's request he agreed to continue employing him, but expected him to leave at the expiration of the second notice. Judgment was entered for the defendant.

Delivery of Caustic Soda .- In the Lord Mayor's Court, London, recently, before the Recorder (Sir Forrest Fulton, K.C.), a claim was made by Dent, Palmer & Co., bankers, 1 Gresham House, Old Broad Street, E.C., against J. Spurling, Ltd., wharfingers and contractors, Peel Wharf, Peel Grove, Bethnal Green, E., for 38l. 5s. 4d., the value of three drums of caustic soda deposited by the plaintiffs at the defendants' wharf and which had been converted by the defendants. Mr. Stable, for the plaintiffs, said that in May 1919 his clients acquired, among other goods, three drums of caustic soda from Vebo, Ltd. The drums were then at the defendants' wharf. Vebo, Ltd., gave a delivery order, dated May 23, 1919, addressed to the defendants, in respect of thirty-seven barrels of stearine, thirty-two cases of palmoil soap, and three drums of caustic soda. The stearine and palm-oil soap had been disposed of, and no question arose in respect to them. On May 30 defendants sent an account for their charges in respect of the three drums of caustic soda, amounting to 5l. 6s. 6d., which the plaintiffs paid. Nothing happened until March of the present year, when the plaintiffs instructed a firm of brokers to sell the three drums of caustic soda, and gave instructions to the defendants to deliver the goods to the brokers. The defendants replied that they had not the three drums on hand, and referred plaintiffs to the liquidator of Vebo, Ltd. Ultimately the brokers informed plaintiffs that, having failed to get delivery of the caustic soda, they had to buy in the market against them at 45s. per cwt., and were debiting plaintiffs with 38l. 5s. 4d. The plaintiffs paid that sum, and now sued the defendants for it. In June 1919 Vebo, Ltd., went into liquidation, and subsequently they transferred to Messrs. Gill the whole of their holding of caustic soda. By a blunder, they appeared to have given a delivery order for the caustic soda which belonged to the plain-tiffs. The defendants had received the delivery order, and had delivered the plaintiffs' property to somebody else. For the defence, Mr. William E. Stopps, secretary of the defendant company, said on May 23 they received the delivery order from Vebo, Ltd., relating to thirty-seven barrels of stearine, thirty-two cases of palm-oil soap, and three drums of caustic soda. The caustic soda was not in their possession until May 25. The account which the plaintiffs had paid was for landing charges, but they had never at any time paid rent. There were ten drums in all of caustic soda, and they had been released by the liquidator of Vebo, Ltd., to whom credit was given for the charges. On January 20 Messrs. Gill wrote that they had made arrangements to pay the charges in accordance with the delivery order given by the liquidator, and the whole of the caustic soda was delivered. After an interval of ten months they had an application from the plaintiffs for three of the drums. For the defendants, it was suggested that their liability depended on whether they were entitled to act on the delivery order given by the liquidator of the company on January 19, 1920, as against the delivery order of the plaintiffs. The plaintiffs, it was contended, had not done as much as they should to establish their ownership of the goods with the defendants. Without calling upon the plaintiffs to reply, the Recorder said he was clearly of opinion that the plaintiffs were entitled to recover in

that case, and that it was an undefended action. He gave judgment for the plaintiffs for the amount claimed.

Borax Case .- At Guildford Police Court, on June 18, Mr. Ernest James Blaker, chemist and druggist, Haslemere, trading as Wiles & Holman, was summoned for having sold as purified borax an article which was not of the nature, substance, and quality demanded. Mr. R. Beck (Neve, Beck & Kirby), instructed by the Chemists' Defence Association, Ltd., appeared for the defence. Mr. Kenneth Thomas, who prosecuted on behalf of the Surrey County Council, said that at the defendant's shop the Inspector of Food and Drugs asked to be supplied with 6 oz. of purified borax. The article supplied was submitted to analysis, when it was found to contain thirty parts of arsenic per million, whereas the British Pharmacopeia allowed only five parts per He (counsel) did not contend that the amount of arsenic in this sample would be injurious to the health of anyone taking it, but the purchaser might be prejudiced in many ways. For instance, if a doctor asked for purified borax, requiring it for the purpose of compounding some drugs, he would expect to get borax which complied with the Pharmacopæia. Again, an analytical chemist who wished to use purified borax for the purpose of making experiments would be seriously prejudiced if the impurities were greater than those laid down in the standard manual. Major E. Hinks, B.Sc., F.I.C., public analyst for Surrey, gave evidence as to the character of the sample, as ontlined in his certificate. Crossexamined: In 20 gr. of the borax there was only 0.0006 gr. of arsenic. In order to get $\frac{1}{15}$ gr. of arsenic, the maximum dose, 5 oz. of borax would be required. A quarter of a grain of arsenic would be middly poisonous; it would be contained in, roughly, 1 lb. of borax. Mr. Blaker, giving evidence, said that when he purchased the business he certainly understood that the goodwill included the benefit of any warranties. The borax was a part of the stock which he took over, and the invoice and the label were marked "B.P." He had been in the profession for over thirty years, and throughout that time he had understood that any bottle or package marked "B.P." contained an article which was in accordance with the British Pharmacopæia. The inspector was served from the original package supplied to his predecessors by from the original package supplied to his predecessors by Allen & Hanburys, Ltd., in September 1919, and he produced the label of the paper bag, "Pulv. Boracis, B.P. Dose: 5 to 15 grains." Since he took the business the borax had been in the same bag and had not been tampered with. Questioned by Mr. W. H. Quarrell, solicitor, who represented Allen & Hanburys, Ltd., the witness said he did not know the history of the package between September 1919 and February 1920, when he bought the business. Mr. Blaker business Mr. F. G. Enticknapp, assistant to Mr. Blaker and assistant with Wiles & Holman for eleven years, gave corroborative evidence. By Mr. Quarrell: The parcel had not been locked up. Mr. William Johnston, Ph.C., secretary of the Chemists' Defence Association, Ltd., said it was always understood that "B.P." meant that the goods were in accordance with the British Pharmacopæia. Under cross-examination by the prosecuting solicitor and in reply to questions from the Bench, Mr. Johnston stated that "Puly. Boracis" meant Pow-Johnston stated that "Pulv. Boracis" meant Powder of Borax, and that, although that d'd not correspond exactly with the B.P. title of "Purified Borax," the fact that the letters B.P. were upon the label and upon the invoice showed that the wholesale house intended the article to be of B.P. quality. Even admitting that the reading was "B.P. dose so and so," the inference was that Messrs. Allen & Hanburys intended the label to be a description of the B.P. borax. He was label to be a description of the B.P. borax. He was sure a firm of their high repute would not put a dose of 5 to 15 grains on a packet of commercial borax which might contain considerable quantities of both lead and arsenic. Mr. William Massey, chemist and druggist, High Street, Guildford, said that the letters "B.P.' regarded as a warranty. Mr. Quarrell said that his clients had verified the fact that the borax was in accordance with the Pharmacopæia. They wished to test the matter to the furthest point, and they had applied to Howards & Sons, Ltd., from whom they purchased the borax, for

Mr. Norman Evers, B.Sc., F.I.C. (Allen verification. & Hanburys, Ltd.), stated that he analysed the borax received from Messrs. Howards and found that it contained less than five parts of arsenic per million. Messrs. Allen & Hanburys had not dealt in commercial borax for eight years. Mr. Bristow Harrison, F.I.C., senior analytical chemist to Howards & Sons, Ltd., Ilford, stated that a consignment on July 29 last contained five parts of arsenic per million, and one in June last two and a half parts per million. Messrs. Howards did not make or deal in commercial borax. Cross-examined, he said that in sampling consignments he took portions from various parts of, say, half a ton. In his experience he had not found a greater variation than two or three parts per million in different portions. Mr. Quarrell said that he maintained the sample sent to Messrs. Wiles & Holman was correct according to the B.P. He did not wish to throw any doubt on the defendant's bona fides, but there was some discrepancy which he was unable to explain. Mr. Beck contended that the assistant who had given evidence was as likely as anyone to know that the substance had not been interfered with, and he did not see what more evidence could be given by anyone than that. Major Hinks, recalled by the magistrates, said that borax might absorb a liquid preparation of arsenic if a vessel containing the latter were leaking near it. The cerk to the justices assured Mr. Beck, who intervened, that no insinuation was intended. The Bench retired to consider their verdict, and, after a considerable time, the chairman intimated that they were not satisfied that the article had been sold in the same condition as received. They did not, however, attribute any fraudulent intention to the defendant, and, under the circumstances, they would inflict only a modified penalty of 11. The prosecution unsuccessfully applied for costs.

Helium.

ON June 17 the meeting of the Chemical Society was held at the Institute of Mechanical Engineers, Westminster, S.W., Sir James Dobbie, F.R.S., the President of the Society, in the chair. Prof. J. C. McLeman, F.R.S., read a paper on "Helium." In reviewing the characteristics of helium, Prof. McLeman stated that in 1868 new lines were discovered in the solar spectrum, and the name helium was given to the unknown body producing them. Similar lines were discovered in the gases emanating from Vesuvius in 1882, and in the gas from uranite in 1890. In the year 1895 Sir William Ramsay observed these lines in the spectrum of the gas obtained from cleveite, and he was the first to isolate helium and identify this gas as an element. Helium is present almost everywhere—in gases, in minerals, in springs, etc.—and investigations conducted at some of the mineral springs in France showed that as much as 5 per cent. of helium is present, whereas in the British Empire a content of not more than 0.5 per cent. has so been established, the highest percentage being found Canada. Prior to 1918 the total amount of helium in Canada. isolated did not exceed three or four cubic metres, and its market value was about 300%, a cubic foot. Helium is twice as light as hydrogen, it enters into no combinations. is quite inert, has a low sparking potential, and is monoatomic; it liquefies below the temperature at which hydrogen becomes a liquid. In 1914 the proposal was made to replace the use of hydrogen in airships by that of helium, in view of the advantages presented by the latter gas for this purpose: it is non-explosive, the rate of diffusion through the envelope is 30 per cent less than the diffusion of hydrogen, while it possesses 9.6 times the lifting-power of the latter. In the autumn of 1915 Prof. McLennan was asked to investigate the sources of helium in Canada, and later throughout the Empire, and to work out the problems connected with helium, With the aid of numerous slides Prof. McLennan illustrated the occurrence of helium in Canada. The highest percentage is to be found in Ontario, in the gases yielded by the various oil wells along the Grand River, where an average

of 0.33 per cent. of helium is found. Medicine Hat and Alberta follow as sources of supplies. He mentioned that at Bow Island a supply of 10,500,000 cubic feet of helium is available annually, and showed, by means of slides, the pipe line, 160 miles long, by means of which the natural gases are conveyed from Bow Island to Calgary, where they are utilised for various purposes. He also alluded to the discovery made that in Vancouver a gas containing 99 per cent. of nitrogen and some helium escapes from holes.

Prof. McLennan then proceeded to describe the steps taken to obtain a supply of helium, and showed numerous slides of the station erected at Calgary, where the helium was isolated from the natural gases brought from Bow Island. He explained in detail the improvements effected in the arrangement of the Claude oxygen column, the principal object being to prevent any loss of cold, by making the liquid gas (nitrogen) go round the apparatus. Helium of 87 per cent. purity was first obtained in Kensington in 1918, and the Calgary station was in full working capacity in the summer of 1919. At first nitrogen with a content of 5 per cent. of helium is obtained, while liquid methan, pentan, and butan pour in a deluge from the first column of the apparatus. By submitting this 5 per cent, helium to a temperature of -163° at a pressure of 25 to 30 atmospheres, by boiling the nitrogen present in the last column, helium of 87 to 90 per cent. purity is obtained, whereby 60 to 80 per cent. of the total helium present in the natural gases is isolated. From 500,000 cubic feet of gas treated by this process, 20,000 cubic feet of 5 per cent. helium was obtained in one week, which yielded nearly 2,000 cubic feet of 87 per cent. helium. By the use of liquid air it was possible to purify the helium so as to obtain it in a condition of 90 to 99 per cent. of purity. To produce 10,500,000 cubic fect of helium a year would involve an outlay of 100,000/. for the erection of the necessary plant at Calgary, while the annual charge would amount to about 70,0007. It would then be possible to produce a cubic foot of helium at a cost of $2\frac{1}{2}d$, compared with the cost of 300l. in 1918. The helium thus produced would be of 97 per cent. purity, and represent a yield of 80 per cent. of the total amount present in the natural gases treated by this process. However, helium is scarcely likely to prove of practical value for filling airships, as the total annual yield would only suffice to fill two or three airships of the big type. On the other hand, helium can prove of use in other directions, and in this connection Prof. McLennan referred to the proposal made of utilising it as a non-inflammable filling around high-tension switches in the place of oil. Experiments with a mixture of oxygen and helium have been conducted for the use of divers to prolong submersion. Hydrogen with a content of 20 per cent, of helium is still non-inflammable. But the chief interest of helium resides in its scientific uses for various forms of research work, particularly in the study of phenomena connected with low temperatures, as it liquefies at a temperature only a few degrees above absolute zero.

Prof. McLennan's account of his achievement was warmly applauded, and tribute was paid to his far-reaching contribution to the advancement of science, as well as to his fascinating and interesting presentation of his magnificent results, to obtain which so many difficulties had to be overcome.

Care in Counter-prescribing.—A French pharmacist, who was asked by a client to replace methyl salicylate by some preparation not having so disagreeable an odour, dispensed mesotan, a product composed of salicylic acid and formaldehyde. Eruptions and swelling of the hand and arm treated followed. The customer sued the pharmacist, but (through the intervention of the General Association of French Pharmacists) the matter was compromised. A doctor stated that most of his colleagues of the Academy of Medicine had given up prescribing mesotan on account of its liability to produce irritation. Dr. Henri Martin warns his colleagues in consequence that prudence in counter-prescribing is specially necessary.

Summer Outings.

Bradford Chemists' Trip.

The members of the Bradford Chemists' Association had their annual outing on June 16, when a party numbering seventy-nine journeyed by motor char-à-banc to Bolton Abbey, where some time was spent. A halt was also made at Burnsall, where the company walked along the river bank, to meet the motors again at Linton. Tea was partaken of at Kilnsey, and at 7 P.M. the return journey was commenced. The outing was made in fine weather, and an enjoyable day was spent.

Edinburgh Assistants' Botanical Excursion.

THE Edinburgh Chemists', Assistants', and Apprentices' Association held the second botanical excursion of the session on June 18, when, despite a sharp thunderstorm, a company of some twenty members gathered at Marchmont and, under the leadership of Mr. J. Rutherford Hill, Ph.C., walked round Blackford Hill and by the Braid Burn to Newington. At Braidburn there was pointed out the interesting combination of varied ecological conditions within a narrow compass. In the bed of the stream were found aquatic plants like Veronica beccabunga and Rannaculus aquaticus; plants of the alluvial soil, like Petasites vulgaris and Minulus luteus, were found on the banks; to the right were cultivated fields with such plants as Matricaria inodora, Matricaria chamomilla, Medicago sativa, and Fumaria officinalis; to the left were rock and alpine pasture-land plants like Lychnis viscaria, Sedum album, Reseda luteola, Digitalis purpurea, Galium saxatile, and Dianthus deltoides. As evidence of the lateness of the season it was noted that Sambucus nigra was just coming into flower. A large collection of plants was made, including Berberis aquifolium, Barbarea vulgaris, Erodium cicutarium, Acer pseudo-platanus, Ulex europaus, Cytisus scoparius, C. Laburnum, Trifolium repens, Vicia tetrasperma, Prunus cerasus, P. spinosa, P. laurocerasus, Rubus fruticosus, Geum urbanum, Rosa canina, Pyrus aucuparia, Pyrus terminalis, Crataqus oxyacantha. A vote of thanks was accorded to Mr. Hill.

Manchester Chemists' Motor-drive.

A large and representative gathering of the members of the Manchester Pharmaceutical Association, with their wives and friends, left Manchester in three motor charsà-bancs on June 16 for Chester. The party of seventy-s x were favoured with ideal summer weather until after passing through Northwich, when they encountered a thunder-



AT EATON HALL.

storm for a short period. After tea the party journeyed to Eccleston by steam launch, and on reaching their destination, Eaton Hall was visited, where a photograph was taken opposite the main entrance. Mr. Cecil Owen and Mr. Dickenson (President), of the Chester Pharmacists' Association, acted as guides to the party. The majority voted it the most successful picnic the Association has had for the last twenty years, and it was certainly the largest picnic ever organised by the Manchester Pharmaceutical Association centical Association.

North Wales Federation.

THE North Wales Federation of Pharmaceutical Asso-The North Wales Federation of Pharmaceutical Associations held its first meeting at Rhyl on June 16. The President (Mr. J. B. Francis, J.P., Wrexham) was in the chair. He was supported by Messrs. Hugo Wolff, W. H. Saunders (Liverpool), McIntosh (Llandudno), Ashfield (Rhyl), J. W. Adamson, Colwyn Bay (treasurer), J. E. Jones, Cefn (secretary), and representatives from the Denbighshire, Flintshire, Merionethshire, and Carnarvonshire Associations. The President welcomed Messrs. Hugo-Wolff and W. H. Saunders, and montional the fact that Wolff and W. H. Saunders, and mentioned the fact that this was Mr. Wolff's first visit to a meeting of pharmacists in North Wales. Mr. Saunders had just arrived in England, after a ten-months' business tour around the world. Mr. Wolff addressed the meeting on Business and Pharmacy, calling attention to some of the main problems affecting pharmacy to-day, and in particular detailed the action taken by the Council to safeguard pharmacists as far as the Dangerous Drugs Bill was concerned. He pleaded for the setting up of a Pharmaceutical Chamber of Commerce, and, in view of the proposed amalgamation of two large trading concerns, advocated the teaching of salesmanship, if the independent pharmacist was to hold his own. He briefly sketched out a plan for the study of salesmanship as a business-getter. The question of face values for proprietaries was also dealt with. Mr. Saunders said the one outstanding quality he found among Colonial chemists was that of courage in demanding prices for goods bearing generous profits, and he suggested a little more courage on the part of the chemists at home, not only in getting better prices, but in making up their minds precisely as to what they want in the way of improved conditions, legislation, and pharmaceutical politics. Mr. Saunders also gave an interesting account of the way in which the art of salesmanship was taught in America. The speaker further stated that the drug-trade abroad was bigger and more important than at home, and offered substantial remuneration and rewards to good and capable men. He described the system of early closing carried on in New Zealand, where all pharmacies close not only in the luncheon hour from 1 to 2 P.M., but also at 6 P.M. every evening and 1 P.M. on Saturdays. All prescriptions required during the time in which chemists were shut were compounded in a separate establishment run on the lines of a small limited company, the chemists on the thes of a small limited company, the chemists being the shareholders. Mr. Saunders mentioned that it is forty-four years since first he commenced travelling North Wales. On the motion of Mr. Adamson, seconded by Mr. Ashfield, the thanks of the meeting were tendered to the speakers. Mr. Saunders briefly responded on behalf of Mr. Wolff and himself, and invited those present to take tea with him.—Prior to the general meeting the executive met, the President taking the chair. Mr. J. O. Roberts (Newtown) was appointed to the executive instead of Mr. Nash, who had resigned. Messrs. Adamson and Llewelyn Jones (Colwyn Bay), on behalf of the West Denbighshire Association, brought up the matter of the regrouping of associations, and it was agreed that the present grouping of associations in the area is unworkable, and that the secretary, in consultation with the present associations, should draw up a scheme for regrouping. It was also resolved that the local associations affiliated be asked to consider the question of unremunerative patents, and the desirability of selling all patents at face value. The secretary was instructed to communicate with a number of patent-medicine owners, when the present the present of the patents are the present of the patents. urging them to increase the remuneration. The treasurer reported that he had 5l. 13s. 2d. in hand, and urged upon the representatives of those associations who had not yet paid the levy to see this was done at once. Mr. Adamson raised the question of the charges for dispensing prescriptions, and detailed the scheme adopted by the Colwyn Bay Association, stating that it worked well. The time and place of next meeting was left to the President and secretary. Correspondence was submitted from the Local Associations Executive approving of the draft rules and constitution, also confirming the appointment of Mr. J. E. Jones as secretary of the Federation.



Presentation to Mr. John Rutherford Hill.



A DISTINGUISHED company of pharmacists gathered in Ferguson & Forrester's Restaurant, 129 Princes Street, Edinburgh, on June 16, to do honour to Mr. John Rutherford Hill, resident secretary in Scotland of the Pharmaceutical Society of Great Britain and hon secretary of the Pharmaceutical Standing Committee (Scotland), by entertaining him at a complimentary dinner and presenting him with his portrait in oil, a piece of silver plate, and Treasury Bonds to the value of 1,800%. The chair was occupied by Mr. Thomas Guthrie (Clydebank), chairman of the Standing Committee, and Mr. James Jack (Arbroath) and Mr. Alex, A. Dick (Bellshill) were croupiers. There was a large gathering from all parts of Scotland, among others present being Sir Harvey



MR. JOHN RUTHERFORD HILL.

Photographic copies, mounted, can be supplied at 5s. by T. & R. Annan, 518 Sauchiehall Street, Glasgow.

Littlejolm, Professor of Forensic Medicine in Edinburgh University; Sir William Glyn-Jones and Lady Glyn-Jones; Sir James Leishman, of the Scottish Board of Health; Mr. J. P. Gilmour, editor of the "Pharmaceutical Journal"; Mr. W. L. Currie, ex-President of the Pharmaceutical Society; Mr. J. Innes Fraser, chairman of the Board of Examiners in Scotland; Mr. David Stoddart (Kirkcaldy); Dr. J. F. Tocher (Aberdeen), Mr. David Gilmour (Dumfermline), and Mr. Coull. Mr. G. Shiach Kitchir, hon, secretary and treasurer, intimated that some hundleds of apologies for absence had been received.

Mr. W. L. Currie, in proposing the toast of

"OUR GUEST,"

said he felt the honour of being asked to present this testimonial to Mr. Rutherford Hill most profoundly.

Touching upon a few of the leading details of his life, he said that although Mr. Hill was born in Lancashire his parents were Scottish. His mother was Ann Rutherford, of the Rutherfords of Crailing—the same Ruther-fords as the mother of Sir Walter Scott, whose name was also Ann Rutherford, and also of the same Rutherfords as the late Professor Rutherford, of Edinburgh University. His father was one of the Hills of Minto, whose ancestors were sheep farmers there for hundreds of years back, so that he was a Borderer with a dash of Celtic blood and of purely Scottish descent. His parents returned to Scotland in his early years; he began his school life at Lasswade in Midlothian and served his apprenticeship with a chemist in Jedburgh. He started his pharmaceutical career at the early age of fifteen, fifty years ago, so that this was his jubile year in his calling. Mr. Rutherford Hill came to Edinburgh in 1852, after gaining experience in typically rural and high-class pharmacy in Scotland and in Ireland, and he took the fullest opportunity of increasing his knowledge of botany while he was employed in the Edinburgh Botanic Gardens. Thirty-five years ago he became a Fellow of the Botanical Society of Edinburgh, and he was a member of the Society of Chemical Industry and of the Associated Faculty of Insurance. He was for a time apothecary to the Royal Dispensary. He had been resident secretary of the North British Branch of the Pharmaceutical Society of Great Britain for thirty-five years. The secretarial duties of the North British Executive had always been heavy, but during the last few years they had been almost super-human. These duties had been undertaken willingly and ungrudgingly, and Mr. Hill had been supported by his staff, who had done the work well.

Mr. Currie then asked Mr. Hill's acceptance, on behalf of the subscribers, first of all of a portrait of himself, which had been painted by a Scottish artist, Mr. John McGhie, Glasgow, which was then unveiled. Secondly, he asked his acceptance of a piece of silver plate bearing the inscription:

Presented, along with your portrait in oil, from friends and admirers connected with pharmacy in grateful recognition of much faithful and zealous service in the interests of the craft.

He was also requested to receive a receipt for Treasury Bonds to the value of 1,800%. He asked them to fill their glasses and drink to the long-continued health and prosperity of their guest, John Rutherford Hill. The toast was received with great enthusiasm.

MR. HILL REPLIES.

Mr. J. Rutherford Hill, when he rose to reply, was received with a prolonged ovation. He said he had served under twelve Presidents and fifteen Vice-Presidents, but of all that number no one, he could safely say, had surpassed Mr. Currie in the assiduity, devotion, and infinite labour in the years he had devoted to the high office he had just vacated, and it gave him the greatest pleasure to accept from his hand this magnificent and overwhelming gift which was far beyond anything he deserved. He was in the most difficult position he had ever found himself in his life. When he came into the room he felt like a criminal coming to justice to be tried, condemned, and punished according to his deserts. But their generosity was so great that they seemed to have forgotten all the blunders and mistakes and stupid things without number, and to remember only the few clear actions which he had stumbled into doing. He had tried to carry out his duties without fear or favour.

Mr. J. P. Gilmour proposed the toast of "Medicine and Pharmacy," coupling with it the names of Professor Harvey Littlejohv and Sir William Glyn-Jones both of

whom replied.



The New "Extra Pharmacopœia."



Dr. W. H. Martindale is catechised regarding the post-war "Extra."

On Tuesday morning of this week we had a visit from Dr. W. H. Martindale, who brought us the first copy of the new edition of the "Extra Pharmacopœia." We took the opportunity, with his ready acquiescence, of putting him through an inquisition as to his "E.P." activities. We did not actually make him "fill in a form," but there was method in our inquiry as we tried to tring out the reason for the phenomenal success of his book.

Question I.—When will the book be ready?—" About a week."

Question II.—Price?—"27s." "Far too cheap; why, it's worth that for paper alone," we said, with our mind on the cost of C. d. D. paper. Dr. Martindale only smiled and then proceeded to recount his experiences in Thames Street and many other places where paper "grows," begging and praying for adequate paper. He wondered what his dear old father would have said to a paper mill's rejoinder a few months ago that "they" might be "induced to accept an order." Times have changed, and although Dr. Martindale hasn't actually started a mill himself, we found we could teach him very little on the subject.

Question III.—Now what can we tell our readers about the new book?—There was a long-drawn breath and the response: "Mr. Editor, what time do you close and will you be here to-morrow? Let's see, Thursday is publishing day..." "No, it's Wednesday this week." He placed the handy fat little volume in our hands with the remark: "That is the preface on p. iv. It runs to some twenty pages or more, and it's virtually a 'Review of Reviews.' You can read it at lunch, it will take you a good half-hour. I've read it more than once, I can assure you, and if you say in the columns of the C. & D. that you find the matter of interest I shall be grateful to you. Then here is a four-page leaflet which reaches the medical profession at home and abroad and the trade..." But we interrupted him with

the trade . . ." But we interrupted him with Question IV.—Then you advertise the book?—The author holds the view that "no one can possibly follow the vocation of a chemist and druggist in business unless he has simultaneously a good stock-in-trade of humour." He therefore enjoyed the question—and got his own back in the few remarks he made. The author next produced a beautiful crayon-drawing measuring some 2 ft. by $1\frac{1}{2}$ ft. showing a design which he had "inspired." The artist, Mr. Wallcousins, got right hold of the idea in less than no time.

Question V.—What is the meaning of the design?—
"Well, it's pretty evident. There was a war, and during
that war we were short of two essentials—food and
chemicals. In the picture, Peace stands with her back
to the bursting shells and the lurching Red Cross lorries
and tells young Science the lesson of the war—'Make
more, grow more.'" We like this picture, and as it is
reproduced in the advertisement of the book in this
issue our readers can form their own opinions.

Question VI.—Do you not find it difficult to write the book and run the business simultaneously?—The reply was that at time the business had to stand back a bit, but, thanks to 'well-tried staff, there was no difficulty about carrying on. We asked our visitor many further questions about the "directions" for making organic chemicals, expired patents, etc. Did he not think he was giving away valuable secrets—information which would prove the nucleus of great possibilities? He pensively stroked his characteristic moustache. "You are not far

out," he cryptically replied. The list which appears in the preface is an index of research work in this one department. The list includes such things as: Amidopyrin, anesthone, aristoquinine, betol, bismuth subgallate, eugallol, hexamine, lenigallol, menthyl valerianate, piperazini resorcin, theophylline, thymol iodide, and tribromphenol-bismuth.

"Good measure" is given in information. Many relatively simple matters have to be worked out practically with weeks of labour in the laboratory before elucidation is sufficiently complete for the "E.P." standard. Take the case of Lysol made with soda. In the book the trick is explained. Lysol nowadays must mix clear with water. In the case of a potash Lysol there is no difficulty, but a soda Lysol to mix perfectly clear with water can only be made under certain conditions. Then, again, many do not know how to make emetine bismuth iodide—a remedy of extreme importance in the treatment of dysentery. Dr. Martindale worked out the formula, and as a manufacturing chemist has made plenty of it, and instead of keeping the secret to himself he gives the information away.

Question VII.—And you give that information away?
—"Yes, and often much against our own interests as manufacturing chemists."

Question VIII.—We notice you concern yourself in the book with all sorts of things of general utility and the pharmacist apart from actual science?—"Well, you see I am a pharmacist in the West End of London, where information is wanted on the spur of the moment. It may be a doctor in the pharmacy or a confrere on the phone or a letter to answer. Coming to fact, because I made a note of it at the time—on Friday morning, June II, I had to turn to my proof copy to ascertain details about the sciatica and neuritis treatment by camphor injection for a medical man, to assist friends in the trade by correspondence regarding the complicated Auld treatment of asthma by peptone injection, to write to another doctor re "Brass Paste" for use in tuberculosis, and to give information to another regarding papaverine instillation for the expulsion of calculi. I think I may say, therefore, that the book is wanted. Then, again, you will see we include such items as spirit rebate and the 1920 Budget advance, and a portion of Mr. Bird's conversion table, and there is mention of 'Power Methylated Spirit' as introduced this year."

Question IX.—Have you been able to keep in full touch with current literature?—The reply was in the affirmative. "You remember the Mrs. Greenwood case? On June 16 Cooper's Weedicide was stated to contain 36 per cent. arsenic, and that information is given on p. 1047 with the words 'Inquest on Mrs. Greenwood.' To-day is June 22." To say the least, we do not often review books of some 750,000 words with facts less than a week old.

Question X.—We notice you do not hold much with golf?—"No not much. I have one or two hobbies—the 'E.P.' is one." Then the doctor started to go, but had not got far away when he returned to say, "By the way, tell them there's a lot of consolation in that bit of Seneca, Multum restabit operis."

["The Extra Pharmacopœia," by W. Harrison Martindale, Ph.D., and W. Wynn Westcott, M.B., D.P.H. 634 in. by 412 in. Pp. 1115+xl. 27s. H. K. Lewis & Co., Ltd., 28 Gower Place, London, W.C. 1.]



The Industrial Problem in the Drug-Trade



An Expert Considers the Subject in all its Bearings.

"This that they call the organising of labour is, if well understood, the problem of the whole future for all who in future pretend to govern men." So wrote Thomas Carlyle away back in the Victorian era, and, were he alive to-day, could not have expressed himself over our present problem more cogently. The Peace Treaty has just brought to fruition the social problem crystallised under the title of the Dangerous Drugs Bill, and, greatly as that affects pharmacy and the drug-trade, there can be no doubt that it is small in comparison with another part of the same treaty which set up the International Labour Conference as a permanent body holding annual session. One effect of this will be that labour conditions become of international import, since certain powers come within the scope of the Conference which have a binding effect upon Governments. It arises, then, that the organisation of the elements of labour becomes a matter of extreme importance, and the interactions of employer and employés something beyond a merely local or even a national affair. The "acid test" of organisation in the drugtrade or any trade is, Can it guarantee its workers an economic wage with a reasonable amount of leisure, and yet not become overburdened with costs so as to render it a parasitic trade on the body politic? That is our industrial problem.

THE MANUFACTURING SIDE.

In 1914 wages in the drug-trade were exceedingly low. For men they varied from 25s. to 30s. weekly, with a small sum in addition as efficiency wage. In the retail the situation was very little better, and though the difference between the two extremes was greater, it cannot be said that the prospects of anyone entering pharmacy with only average ability were entirely hopeful. When prices began to soar in 1915 it was clearly seen by those responsible at the Ministry of Labour that the drug and pharmaceutical chemical supply might become endangered unless some co-ordinating effort was made to meet the unorganised conditions of the trade and provide for means in the form of wages to meet the increased cost of living. Rates in the North were greater than those being paid in London, and considerable uneasiness was shown among the workers. The result was the formation of the Drug and Fine Chemicals Association, which at present includes about seventy firms. Only one large drug firm remains outside, and in the chemical section all the large firms are included, but not all the smaller. There are outside, however, the larger number of firms, though if we include all the employés, apart from the large firms already mentioned, we should find that the total number with the small outside firms was scarcely equal to that in the service of Association firms. As these employers within the Association represent the best firms both in the drug and pharmaceutical chemical trade, it is obvious that the key of the situation is in their hands to make or mar the position of this trade as a national factor in regaining British commercial supremacy. They, on the other side, say the key is in the hands of the workers.

THE WORKERS' VIEW.

Let us survey for a moment the position from this side. The majority of workers in the pharmaceutical chemical industry are divided between five different unions. This state of affairs arose from the contiguity of these unions to large works in 1915, and the fact that they were general unions and catered for anyone of whatever class of work

who could be called unorganised. The fifth union was a sort of omnibus union, which has lost 90 per cent. of its members in the drug-trade, so that we have the unfortunate condition of a house divided against itself in the pharmaceutical chemical workers spread over six unions, but largely in two, while the drug-trade pure and simple is within two unions, but largely in one. The druggists' sundries trade is divided between three unions, and the proprietary trade between two, but largely outside any. The situation is complicated; the division has been exploited, and considerable soreness is in existence through these unfortunate complications, so much so that the Ministry of Labour Department was anxious to set up a Trade Board as the only way out in order to get a uniform minimum wage established.

THE WAGE QUESTION.

It was a very natural objection from all firms within the drug and fine chemical industry to the setting up of this proposed Trade Board, since they were in constant consultation with the unions for collective bargaining, and, it must be admitted, have very fairly dealt with them and consistently held by agreements. The weakness of the position which was apparent, not only to themselves but also to the Ministry of Labour, was that so many small firms carrying on what they term a whole-sale trade, employing comparatively few hands, but, in the aggregate, about two thousand, were not bound by any agreement arrived at between the high contracting parties, and were in the position to cut rates, even if they did not, with the consequent unfavourable reaction on those firms recognising a minimum agreed wage. In some cases this was so bad, and even is so to-day, that the border-line of a sweated industry, as conceived on the present base of a living wage, shows these firms below.

The same conditions applied in the retail. The large employers felt the pressure of combination, but the small and scattered firms have often taken little heed of the changed economic conditions and the upheaval of values. From this source of outside small firms in the wholesale and retail, striving to cut against large concerns, much confusion arose; and eventually the Ministry realised the clamant need of doing something to ensure uniformity in order to provide a living minimum wage. They preferred a Trade Board, as seen in that affecting the grocery trade, rather than an Industrial Council, which would have been a kind of Drug and Fine Chemical Association with a section covering the retail trade, but without any power to compel outsiders to pay agreed rates.

The retail trade on the employers' side is the worst organised. The Scottish Pharmaceutical Federation represents about 60 per cent. of the chemist employers in Scotland, but in England and Wales there is no employers' federation, unless we concede that name to the Local Associations Executive, which, because of it being a subcommittee of the Pharmaceutical Council representing employers and employés, in the ratio of two of the latter to one of the former (when we consider student-associates), can never act solely as an employers' association in spite of any result of the test-case. Moreover, this same Local Associations Executive is an indirectly representative body insomuch that its electors must act solely through other bodies over which the central executive has no direct control Again, the majority will not be employers in the sense that wage questions become of vital import, since they are single-handed, and such rates as were

adopted would, most likely, militate against the bona-fide employer in selling rates,—just as, in the same way, the Drug and Fine Chemicals Association find their strongest weapon before an Industrial Court to be the numbers of small firms not bound by any decision but having the power to cut selling rates in order to get trade, and thereby making it extremely difficult to pay what might be called the trade-union rate to their employés. should be borne in mind that this large section of retailers who only employ themselves would materially affect any acceptance of rates by the so-called employers' associations. Having stated the position of the problem the details of the contending parties will be better understood, though, in passing, it would be as well to add that whatever our feelings on individualism or collective bargaining may be, we must face the fact that the real issue of the war is that the industrial organisers and the industrial workers are one and the same body ultimately, and by being gathered together in their particular spheres of activity, and dealing with each other collectively, they are taking the only reasonable step against the disintegration of society, and the more efficient this is, the sooner shall we provide a common understanding. Moreover, those who remain outside their respective organisations are a menace to that common understanding and common purpose which alone will produce ultimate efficiency in the restoration of British common sense and trade supremacy.

A CENSUS OF PRODUCTION.

Since 1907 there has been no Census of Production, so that in the drug and fine chemical industry we have only very slight data to work on as regards production. It is, however, useful to recall the position in 1907, since the complaint generally made in the industry is that it cannot stand the increased labour costs against foreign competition. In 1907 the total output was returned as between 19 and 23½ million sterling. The persons employed were returned as follows:

> Males under 18 =41,083=1,606 Males over 18 Females under 18 ... Females over 18 ... =4.927

The total was 51,088, including 45,107 wage-carners and 5,981 salaried persons. These figures included the proprietary-medicine trade.

The relation of costs was stated to be as follows:

Cost of materials, 13,983,000l.

Paid to other firms, 9,000%.

Potal, 13,992,000%.

Value of output, 23,447,000%.

Value of output, less cost of material and amount paid to other firms, 9,464,000%.

Difficulties arise at this point because it is impossible to apportion the amount which should be deducted from the sum mentioned for oncost to cover the conversion of the raw materials into the finished products. It is, however, possible to estimate the average cost of labour that was required to convert 13,983,000*l*. into the gross value of the output. From an average taken of wages and salaries in those days it is calculated that the raw material required for conversion into the finished product 20 per cent. for labour or productive costs. If we take the selling price to be 100.0, then the table works out as follows:

68.0 20.0 Material cost Production cost ... Indirect costs and profits .. 12.0 Selling price ... 100.0

They are such extraordinary figures in comparison with the costing in other industries that it would seem that the Census of Production, from our point of view, was of very little value. The material cost is too high for the selling price, and if these figures bore any relation to the true state of affairs, it justified to some extent the low wages which were being paid. The drug-trade was on the way towards becoming parasitic. Here are official figures arrived at from the Census of Production, but

even this fact fails to produce confidence that these figures accurately represent the industry. The multiplicity of articles, as well as proprietary medicines, undoubtedly makes a high material cost a real factor; but surely not quite to this extent. The total value of the production should most certainly have been very much higher than 23 millions on a 13 million cost of raw material, or the consumers were getting their drugs and medicines at a ridiculous return to the producers. For this reason it seems necessary for these figures to be ignored, though it does show the value of such evidence if it is built on what seems to me to be wanting-more reliable data.

MINIMUM WAGE.

The basic wage in the wholesale was for the lowest-grade male worker 25s, a week. The retail will be examined later. This wage was not what is called a minimum in the sense which is employed in the legislation of various countries, and which will undoubtedly be extended in this country and probably based upon experience in the legislation of this country. Mr. Seebohm Rowntree, in his analysis of the "Human Needs of Labour," estimated that for bare necessities 23s. 8d. was needed at that date for a family of five. In the rewritten estimate in 1918 he gave the cost of living as 35s. 3d.; if this figure is adjusted to the present standard of costs it works out at 75s. a week. Mr. Bevin, on behalf of the Dockers, put it as high as 120s, a week, which provided the base of 2s. per hour as the dockers' standard wage, and incidentally started once again the chase of wages after prices. It certainly seems that the 75s. weekly is nearer the living minimum wage at the present moment, and that Mr. Bevin included certain of the amenities of which Mr. Rowntree took no cognisance. The wages in the wholesale are built on a basic minimum for men of 60s. weekly. (Since the above was written we hear of a readjustment which is now before both parties for acceptance, of a differentiation, to come into operation immediately, of 65s, basic, with additions to 75s. for the present grading, subject to a joint committee of employers and employes going into the question of regrading on the work done.) It should be clearly conceived that this 65s, weekly is for the lowest grade, and the highest is beyond the 75s, and dependent upon experience and efficiency. It will be seen from the above figures that the drug and chemical trade has taken a big step forward, and the charge of 1914 is beginning to lose some of its point. Thus, if we multiply the 25x. by 21, the Board of Trade factor, it brings the basic minimum to 62s. 6d., so that the newly suggested rate for the labourers is 2s. 6d. beyond that calculation.

COVERING THE COSTS.

This is the primary question to employer and employé alike. No one wishes to go back; and, in spite of the newspaper breaks of the vicious circle, it certainly seems that the present generation will only know partial reductions of the high cost of living. However, the steady increase in the wages exhibits solidity of advance rather than the showy ones which have taken place in some other industries where the real divisional question between employer and employé is that of a sliding scale. To both sections alike, the question of paramount interest is how far these justifiable increases can be obtained, seeing that they will only reach the consumer after passing through stages of further increment. On examination of the various price-lists, there is seen to be a certain uniformity of quotations for the stated quantities, but in multiples we find quite a different story, and competition is rather acute. It would appear, then, that there is sufficient organisation in the trade to agree upon prices for normal quantities, so that passing on is quite a simple matter. An examination of the various export lists shows the same uniformity, which gives the impression that the understanding goes beyond the home market. It follows. then, if the drug houses have a reasonable costing system showing an index figure for labour at all stages of production summed up in the necessary final percentage for each article, the addition will be comparatively simple from the costing department. This costing will give the

necessary confidence and balance for increasing production, as it readily shows where lies the wastage in labour or material. At present it is freely stated that production is falling; to some extent this seems true, but an examination of all the factors would readily show us that a little closer study of human nature by employers would soon give the clue to the fall, and, seeing it, they would surely seek to remove the cause. A wage to meet the needs of living, and not too near the margin, together with some security of tenure, is indicated.

FOREIGN COMPETITION.

Great play was made at the recent Industrial Court over the relativity of prices for drugs and chemicals in other countries, as compared with our own, and the urgent need of keeping production high and costs low in order to be able to meet not only the competition of America and Japan, as well as that from Germany. The two former countries have the whip hand, and the list of reparation chemicals published in the C. & D. shows the possibility of a lively resuscitation. The Board of Trade returns are not very illuminative from our point of view. The value of particular drugs and chemicals exported and imported are given; the quantities of "other sorts" of drugs and medicinal preparations are not given, but the value for imports is: Four months, 1,894,161, against 603,7667. in 1913; while exports for the same class were 1,418,007l., against 750,096l. in 1913. The exports of quinine and its salts were 913,793 ounces, against 394,731 in the corresponding period of 1913, while the imports were 1,815,327 ounces, against 1,266,885 in 1913. It is to be noted that the imports of cinchona were 7,428 cwt., against 13,612 in the same period in 1913. Where values alone are given we can only surmise, and in quinine it would appear that a large quantity was for re-export or a working on stocks. That there is a quantity of quinine in a fluid state is seen by the Government sale on June 23 of 120,000 ounces. This disposal of surplus Army medical stores is a factor in the depression in the wholesale trade which so far has not received much publicity. The figures given do not show an unhealthy condition, but they do show us that we have all got to pull together in order to bring steadiness both in the markets and in production. The excess-profits tax cripples manufacturers in attempting enterprises, and this reacts on labour, while the uncertainty of Government interference in trade matters leaves an unsettled market in foodstuffs which makes the probability of a staple minimum wage being arrived at a remote contingency. The difficulty in estimating contracts ahead is not only due to labour, but to the Government, as a disturbing factor which militates against settled conditions. Nevertheless, by greater concentration in manufacturing such things as fine chemicals, it seems that Great Britain should easily hold its own, and if the Government could make up its mind to an expenditure according to its reasonable income the drug and chemical trade would be able to look after itself against all comers and stability on a fair-wage basis tend to increased production, since the greater the margin of safety all workers have, the more settled is the condition; but claims for increased wages on a flat-rate basis every four months destroy confidence and reduce production.

RETAIL TRADE.

The retail side in pre-war days showed the same happy-go-lucky condition. Economic wages were comparatively few, and mere subsistence wage the rule. Then, as now, the large firms or multiple shops showed the way, though departmental stores were great offenders against the economic wage. In very few recognised trades was it quite so easy as in pharmacy to go into business; the capital needed was comparatively small, and with due expenditure of energy and application of common-sense it was possible to get a reasonable turnover which would produce a fair living. The consequence was that men would enter as assistants largely to gain experience, and often at a wage which was not economic. Those who did not feel the call to own a business were always up against this migratory class, which, by their shortness of tenure,

tended to keep the wages low. The number of men going into business even operated against themselves in such a case as National Health Insurance, with remuneration was offered at 2s. per hour for dispensing medicines for insured persons. There were plenty who jumped at it as extra business, and considered that $33\frac{1}{3}$ per cent. for drugs dispensed met the case. True, it was contract work, but as rush-hour work it never could be remunerative if it displaced trade yielding 50 per cent. profit, which was the average shown by the Peat figures. The strange part is that the most recent figures of the London Pharmaccutical Committee show that the terms of 1920 are really no better; and we see chemists timid and fearful of the profiteering tribunals, charging 331 per cent. for drugs and chemicals, and in some cases, so unused are they to changed values, charging prices yielding only 25 per cent. profit and even less, mostly through ignorance or fear. Associations have repeatedly asked for $55\frac{1}{3}$ per cent. on proprietary articles, which, in the case of quick sellers, produces a very high margin, while again they demand 20 to 25 per cent. for articles which are almost sold before they are called upon to pay for them; yet they are so illogical as to sell drugs and chemicals of which they are almost the sole purveyors at 35½ per cent. profit. There is no wonder that many are frightened at assistants asking for wages on present-day rather than pre-war values. A clear lead has been given in London on the question of profits by the price-list issued under Association auspices, where care is taken that no case of infringement of the pre-war profit occurs, and it is on some such basis that the changed economic conditions must be met. The question has often been asked, What is the relation wages should bear to turnover? This is the wrong standard of comparison in such a mixed business, and the question can only be answered by analysing the turnover on two main lines of distribution and production. A big turnover may take place, but at a small ratio of profit, while a comparatively small turn-over might produce a high rate of profit. Distribution requires little skill, though it may mean a great knowledge of human nature and of salesmanship, while production obviously requires skill and knowledge, since it naturally includes dispensing. In all scales of wages put forward the differentiation has not been made sufficiently clear. By the Peat figures the net profit of an average business in 1914 was approximately 25 per cent., but in the average outgoings the details are not given, so that we have insufficient data for a guide. From our knowledge of the investigation, the figures obtained were mostly from single-handed businesses, so that assistants' wages of the qualified variety scarcely came into the computation. It would appear, then, that the 25 per cent, was exclusive of what might be termed the non-productive element, and would provide the wage for the employerthat is, his profit for carrying on the business. If this amount were universally available, it is quite easy to calculate what should be the remuneration (from the net profit) for the producer in the shape of a manager of any particular business. Thus, on 1920 values a 1,000l. business in 1914 would be turning over well beyond 2,000l., and, with the ancillary services included in the outgoings previously mentioned, we arrive at the basis assistants have worked on in calculating what should be the modern rate of pay. A conference on wages took place with the Scottish Pharmaceutical Federation in November last. was not possible to come to agreement, and the figures was not possible to come to agreement, and the figures then put forward have not lost, but gained, weight by the delay, since cost of living has increased. In Scotland, where the apprenticeship system is more in operation than in other countries, they favour a Trade Board, and there appears little doubt that the dispute between the Pharmaceutical Society and the Federation has kept back the possibility of agreement on wages.

Irish pharmacists are well in front of their English and Scottish confreres. Qualified assistants agreed upon a basis wage of 75s., and qualified chemists 110s.; this was reached after a strike. The Scottish figure was 90s. on qualification, and after suitable experience 120s. a week. Again, the Irish unqualified rate is 60s., but in

£ s. d.

London it is 90s. for the agreed foundational experience. The Local Associations Executive is expected to meet representatives of the unions on June 23, when we shall probably come to further understanding on a possible agreement. It should be noted that in 1918, under the scheme for training disabled soldiers and sailors adopted by the Pharmaceutical Council, in agreement with the Ministry of Labour, partially disabled men could be trained, and the expectation of minimum wages was as follows: First year of adult training 45s., second year 50s., and when qualified 70s. weekly. The motion for changing the minimum to 80s. was negatived by twenty to one. The rate was a midwar wage. The payment for apprenticeship was uncertain, since the real apprentice condition which originally prevailed had fallen into decay, and apprenticeship was often a form of cheap labour.

In looking over the various files we find that the retail rates in 1914 varied from 45s, weekly to 75s, for qualified assistants. The lower rates applied in country districts, the West of England, and the North of Scotland. Managers appear to have been paid on very varying bases, some with a low minimum of 458., but a liberal bonus system by which they easily augmented their wage to 100s., and, in several cases to my knowledge, 140s. and 150s. Managers on low bonus systems were getting 80s. to 90s. weekly, and their bonus was often more of the nature of profit-sharing paid annually or, in some cases, partly so, with an addition in some form of share

certificates.

The rates may be summarised:

... 80s. upwards, plus bonus. Experienced qualified Qualified (recent) ... 70s. to 100s. 50s. to 70s. ... 50s. to 70s. ... 25s. to 45s. ... 10s. to 25s. Improvers
Apprentices

The unqualified assistant complicates the issue and makes it difficult to apprise his position, owing to the fact that he relied largely on his native ability as a salesman or dispenser to get the best wages possible and make secure his position. From all the data it would appear the unqualified varied most, ranging from 35s. to as much as 80s, weekly. There was the margin of the unwanted and "covers," the bane of pharmacy, which also militated against stability and seems an evil ever present with us. In institutions the remuneration varied from 801. per annum to 3001., according to position.

We reach the point now of trying to find out what is the multiplying factor to be applied to pre-war rates in order to arrive at a fair remuneration for to-day. We accepted $2\frac{1}{2}$ per cent. in the wholesale on the cost-of-living basis. Now, if 23s, 8d, was the lowest possible living minimum, ou Mr. Seebohm Rowntree's showing in 1914, it would almost follow that a qualified pharmacist was justified in considering 60s, as his minimum. That in many cases in the country he did not receive it, is no real argument against it. A review of all the factors shows that 60s. was an economic wage for a man just starting life as a qualified pharmacist, and this might reasonably be regarded as a basic minimum. This does not help us much in finding the multiplying factor, since we regard that as an economic wage, and not merely a subsistence one. In dealing with the latter, it is usual at the present moment, as in the wholesale, to multiply by $2\frac{1}{2}$, but experts differ whether it should apply to the economic wage, since this contains subsistence plusthe efficiency factor. After considering all the uncertainties of the position, the general view is that two is the factor to employ. There is a great deal to be said for and against, but readers can, and doubtless will, readily take sides in any discussion that may arise. On July 12, 1919 (see C. d. D.), a meeting of a union put forward the following rates:

... ... 140s. weekly ... 100s. weekly Qualified assistants Unqualified assistants

This was using $2\frac{1}{2}$ as the factor on the cost-of-living rate then current. Rates have advanced since, but not pro rata with the cost-of-living factor. Unfortunately,

these public-meeting rates cannot be regarded as anything more than aspirations. The Rhondda dispensers (see C. & D., September 6, 1919) made a demand for 105s. for men and 70s. for women, not necessarily pharmacists, and the miners were reported to have espoused their cause. This was not conceded, as in the Irish case, and the later developments do not appear to have been made public. The so-called "National Scale" in 1919 was:

year, 35s. No apprentices to be taken under sixteen years of age. Apprentices .- First year, 20s.; second year, 27s. 6d.; third

Improver.-First year after apprenticeship, 45s.; junior

Improver.—First year after apprenticeship, 40s.; Junior assistant, second year, 60s.
Assistant.—Five years' experience, 80s.; first assistant, 85s.
Qualified Assistant.—First year, 95s.; second year, 100s.
Qualified locum, 110s.; manager, 120s.; after one year with the firm, 130s.

In many places these are the rates at present prevailing; the post-1919 increases based on cost of living have not, save in a few instances of special merit, been con

WAGE AGREEMENTS.

The following wage agreements in the retail which were carried through by the Drug Union at the end of 1919 are now in force:

Departmental Stores:

| Pharmacists, over five years' qualification | on | 5 | 5 | 0 |
|---|---------|---|----|---|
| Pharmacists, under five years' qualification | on | 5 | 0 | 0 |
| Pharmacists (women) | | 4 | 0 | 0 |
| Assistant dispensers (unqualified men) | | | 0 | 0 |
| Assistant dispensers (unqualified women | | 3 | 4 | 0 |
| Pill-makers | | 3 | 15 | 0 |
| Cachet and tooth-powder makers | | 2 | 0 | 0 |
| Shop assistants, men, over ten years' expe | | | | |
| Shop assistants, women, over ten years' e | experi- | | | _ |
| ence | | 3 | 4 | 0 |
| Shop assistants, men, under ten years' of | | | | |
| ence | | 3 | 10 | 0 |
| Shop assistants, women, under ten year | | | | |
| perience | | 2 | 10 | 0 |
| Public Institutions: | | | | |
| TS 1:0 -1 : 1 | | _ | E | 0 |
| Constant in the second | • • • | 5 | 5 | 0 |
| Second qualified assistant | | | 5 | |
| Unqualified assistants | | | | |
| Junior | • • • | 2 | 15 | 0 |
| The are a management and a large large and 1: Co | T . T | | | |

These agreements are now being modified wherever possible on the following lines. Public service minimum for forty-four hours:

Chief pharmacist The term to include single-handed responsible pharmacist. Other pharmacists 300%. per annum.

These rates have been conceded in several instances in the Poor-Law and other public bodies as well as voluntary institutions.

Evening clinics, as overtime, 7s. 6d. per hour. Part-time service, 3s. 6d. per hour, with a minimum fee of 5s.

In the Retail (forty-eight hours):

Full manager, after five years' experience
Qualified assistant, after five years' experience
Qualified assistant, under five years' experience
Unqualified assistant, after five years' experience
Unqualified assistant, under five years' experience
Unqualified assistant, under five years' experience

The above rates were suggested at the beginning of the year, and multiple-shop firms have agreed in several instances to put them into force. The ordinary retail has not yet, save in a few instances, come into line.

Passing on the Costs.

It is plainly evident that increased costs have to be met at the present time, and as we are not in business as philanthropists these same costs must be passed on to the consumer. The problem is not quite so simple as in the recent one of taxed alcohol, but it can be solved.

Pharmacy is, from all accounts, heading for a slump. The wholesale trade won their case before the recent Industrial Court partly on this plea. Employers vaguely demand more under National Health Insurance, they do not appear to have any exact knowledge of their costs, and vaguely talk of rates and taxes and assistants' wages.

They demand the boycotting of unremunerative proprietaries, and vociferously assert that anything under 35\frac{1}{3} per cent. profit is unremuncrative. All these things are good in their way, but none of them will be more than a palliative of the industrial problem. Associations meet and form their local committees to decide on what they call minimum prices for drugs and surgical sundries. Proprietaries have their rates of profit fixed by the medicine-stamp duty and the increased costs of production, so that little relief is to be expected from this quarter, at least for the next twelve months Toilet preparations are on an easier basis, but not altogether satisfactory, while perfumes look like being taxed out of existence. Only by increased turnover can relief be obtained from the larger part of the chemist's business. By unity of control in a masters' federation further relief could be obtained on the amount of profit by the judicious application of pressure. It was shown in the North London that departmentalising the chemist's business was the only way out after working out primary costs. The profit on the various groups was suggested as follows:

 Drugs
 ...
 50 per cent. on sales.

 Dispensing
 ...
 50 per cent. on sales, plus fee.

 Sundries
 ...
 50 per cent. on sales.

 Own proprietaries
 ...
 50 per cent. on sales.

 Patents
 ...
 33½ per cent. on sales.

 Foods
 ...
 25 per cent. on sales.

The Profiteering Act "put the wind up," and chemists were afraid to charge in order to secure the pre-war rates, and in many cases have accepted the so-called minimum rates or even been content with 33½ per cent., which is neither fair to themselves, their fellow-chemists, nor those they may employ. The general feeling has been that you cannot pass on the costs in the drug-trade, but it has been pointed out that "needs must when the devil drives." Taxed alcohol is passed on in increased costs. The public will pay a fair price, but does not like being had, and when one section talks about 33½ per cent. and another 50 per cent. profit, it follows that some members of the public will feel the latter are profiteers. In the past chemists have depreciated their own market, and, judging by some price-lists, the game is still being played. This depreciation not only gave a general sense of starvation in our outlook on life, but has materially affected the business life of those who could not visualise something beyond that of the average man.

The method of passing on is fairly simple, as anyone with a knowledge of costing and accountancy can easily arrive at the index figure of all articles. whether 10 or 10,000; it only requires labour in evolving that critical figure. If alcohol is taxed 50 per cent. more, it is easily seen and adjusted; if rates, taxes, and rent go up 20 per cent. the margin can be adjusted; but on drugs and chemicals there is more intricacy in finding out the index dependable on 15 per cent. on extra wages. General conversation at Association meetings leads one into a blind alley; the case needs a scientific costing and a fearless balancing of the findings over the necessary sales. If a pharmacist wails, "We cannot get these prices" and never sets about it in real earnest, then no one on earth can help him; but if he desires to find a way out and desires it badly, then that way will surely be found.

CONCLUSION.

The "revaluation of all values" has not found pharmacists altogether wanting. Men with faith and the larger vision are with us; they should receive our confidence for the building of our future on a surer and firmer foundation. The problem is a balancing of contending interests as keen in our trade as in other industries. A fair balance and adjustment can be arrived at by frank and free conference; selfishness on either side will bring calamity for both. A brighter future is assured if we see to it that men with courage, men who are unafraid to deny themselves, men capable of spending themselves in service, have charge of the helm in the present passing through stormy waters.

Westminster Wisdom.

By the "C. & D." Parliamentary Representative.

DENTISTS ACT (AMENDMENT) BILL.

This Bill is still in course of preparation, according to a reply given in the House of Commons on June 18 by Dr. Addison.

INCREASE OF RENT BILL.

The report stage and third reading of the Increase of Rent and Mortgage Interest (Restrictions) Bill took place in the House of Commons on June 21. An effort was made to stop all evictions from business premises, whatever their rental, until the Select Committee has reported, but this amendment was defeated.

SEXUAL OFFENCES BILL.

The House of Lords communicated to the House of Commons on June 16 a resolution "That it is desirable that the Sexual Offences Bill be referred to the same Joint Committee of both Houses of Parliament, as proposed in the case of the Criminal Law Amendment Bill and the Criminal Law Amendment (No. 2) Bill."

Business Premises.

On June 21 a Select Committee of the House of Commons was appointed to inquire into the position of leaseholders and tenants of business premises and to advise whether any, and, if so, what alterations in the law are required to remove obstacles to the development of their businesses arising out of conditions affecting tenure, undue restrictions on improvements, and unteasonable increases in rents. The Committee consists of Major Barnes, Sir T. Bramsdon, Mr. Burn, Major V. Henderson, Mr. Hinds, Colonel Hurst, Mr. G. W. H. Jones, Mr. McVeagh, Major Watts Morgan, Sir H. Nield, Mr. A. Parkinson, Sir P. Pilditch, Mr. Rodger, Colonel Stephenson, and Sir K. Wood.

SHOPS (EARLY CLOSING) BILL.

The third reading of this Bill came on in the House of Commons on June 18, but the debate was adjourned. As the Bill is a private member's measure, it is unlikely that it will proceed further this Session. The proceedings began by the addition of two new clauses to the Bill—one of these exempted post-office business, and any premises in which the business is transacted, from the application of the Bill; the argument being employed that if the other business conducted in the post-office premises were not carried on it would not be worth while keeping open. The other clause made it clear that a boot-repairing was a "retail trade or business." During the consideration of the Bill as amended in Standing Committee an amendment was proposed to Clause 1, limiting the application of the Bill to shops where assistants are employed, so as not to interfere with small businesses. Sir Kingsley Wood pointed out that the amendment would be fatal to the whole principle of the Bill if it applied only to those who employed assistants. Many members spoke in favour of the amendment, and it was added to the Bill after a division, 123 members voting for the amendment and 96 against. Another amendment, dealing with Sunday trading, was withdrawn. Sir F. Banbury proposed an amendment altering "seven o'clock in the evening' as the closing time on every day except Saturday, to "nine o'clock." Mr. Inskip wished to make it "eight o'clock," but the House, on a division, retained seven o'clock as the hour of closing. Mr. Inskip then proposed an amendment prohibiting the employment of any shop-assistant for more than forty-eight hours in the week. The amendment was accepted by the promoters of the Bill and agreed to, as was another amendment allowing the shopkeeper to continue serving customers after closing time, so long as he does not employ an assistant. During the discussion on Clause 2 the hour of five was reached, when the debate was automatically adjourned. In popular parlance, the Bill was talked out.



New Northern Pharmacopœias.



1. The Norwegian Pharmacopæia.

Until the issue, in 1914, of the present edition of the British Pharmacopæia, Great Britain shared with Finland, Norway, and Portugal the somewhat doubtful advantage, in these days of rapid scientific advance, of possessing Pharmacopæias issued in the past century. The fourth edition of the Norwegian Pharmacopæia, officially introduced by a Royal Resolution from the beginning of 1914, replaced the former volume issued in 1895. The new edition consists of 471 pages, excellently printed on good paper. With the sole exception of the Latin titles, the language used throughout the work is The first nine pages, following the brief introduction, are devoted to a short explanation of twentynine different manipulations connected with pharmacy. These include directions regarding the collection, drying (at a temperature not exceeding 45° C.), and storage of medicinal plants and parts thereof, the methods to be followed in cutting, or reducing them to powder. Percolation, sterilisation, polarimetric determinations, the determination of melting- and boiling-points, and of iodine, saponification, acid, and ester indices are also briefly described. A weighable residue is an expression used to designate an amount exceeding 1 milligram. The final note requires that all medicines shall comply strictly with the pharmacopæial requirements, and that all remedies for which an official mode of preparation is given must be prepared in a Norwegian pharmacy.

THE NOMENCLATURE.

On turning over the pages of the work the reader is at once struck by the Latin nomenclature adopted, which differs materially from the form followed in the British and United States Pharmacopæias on the one hand, and that found in the Austrian, German, Swiss, Hungarian, and Russian works on the other hand. A few examples will best illustrate this striking difference, and afford another proof of the necessity of uniformity, even when Latin is adopted. Thus we find that the acid designation forms the first part of the title, hence all the bromides, chlorides, and sulphates are grouped together:

Bicarbonas natricus=Sod. bicarb.
Brometum hyoscicum=Hyoscin. hydrobrom.
Brometum kalicum=Pot. bromid.
Carbonas kreosoticus=Creosote carbonate
Chloras kalicus=Pot. chlorate
Chloras kalicus=Pot. chlorate
Chloretum ammonicum=Ammon. chlor.
Chloretum chinicum=Quinine hydrochlor.
Chloretum cocaicum=Cocaine hydrochlor.
Chloretum morphicum=Morphine hydrochlor.
Hydras chloralicus=Chloral hydrate
Hydratocarbonas magnesicus=Magnes. carbonate
Hypermanganas kalicus=Pot. permangan.
Hypophosphis manganosus=Manganese hypophosphite
Jodetum kalicum=Pot. iodid.
Nitras argenticus=Argent. nitr.
Nitras strychnicus=Strychnin. nitr.
Oxydum hydrargyricum=Hydrargyr. oxid. rubr.
Oxydum hydrargyricum=Hydrargyr. oxid. rubr.
Oxydum magnesicum leve=Light calcined magnesia
Phosphas codeicus=Codein. phosph.
Pyroleum juniperi=Oil of cade
Salicylas natricus=Sed. salicyl.
Salicylas phenylicus=Salol.
Solutio superoxydi hydrogenici=Liq. hydrogen. peroxid.
Sulfas aluminico-kalicus=Alum

Sulfas chinicus=Quinin. sulph. Sulfas ferrosus=Ferr. sulph. Supercarbonas ammonicus=Ammon. carb.

Another peculiarity is the (Latin) spelling of aqva, liqvor, ungventum, the use of the word axungia instead of adeps, the retention of the old title hepar sulfuris, the adoption of the word ætheroleum to designate essential oils, and the title sericum adhæsivum for courtplaster.

Compared with the former edition, forty-one preparations have been omitted, while eighty-five have been added—practically double the number of additions included in the B.P., 1914. Among the articles which have been omitted are: Ol. cajuput.; ol. caryophyll.; ol. cinnam.; ol. eucalypt.; ol. sinapis; castoreum; ferr. redact.; moschus; scammon. resin.; morphin. sulpfi.; tinct. lob.; ung. pot. iodid.; vin. colchic.; vin. ipecac.

Additions.

With regard to the additions made in the new work, no mention of the protected name has been made in the case of the newer synthetics, with the sole exception of novocain. Among the preparations added to the present Pharmacopæia mention may be made of the following:

Acid. acetic. (96 per cent.)
Acid. acetylsalicyl. Acid. camphoric. Acid. diæthylo-barbituric. Acid. stearic. Adeps lanæ Æther petrolei Æther pro narcosi Ætheroleum coriandri Aqva sedativa Bitartras suprarenicus Bromoform Chloroformium pro narcosi Cinnamalum Coffeine Creosote carbonate Emulsio olei jecoris aselli Eucalyptol Eugenol Extr. thymi fluidum Hexamethylenetetramin Iron hypophosphite

formaldehydi Liqvor saponatus Manganese hypophosphite Novocain Potassium hypophosphite Proteinum argenticum Pulvis antiasthmaticus Salicylas antipyricus Salicylas hydrargyricus Sodium citrate chloreti Solutio natrici physiologica Solutio formaldehydi Solutio subacetatis aluminici Solutio superoxydi hydro-genici Sulfas sparteicus Syrup, hypophosphitis cal-Syrup. hypophosphitum comp. Vin. frangulæ comp.

OTHER FRESH POINTS.

With regard to the single articles, the Latin title is followed by the Norwegian name or names of the preparation to be described, and in the case of chemical substances the chemical formula and molecular weight are included. Where the use of a normal volumetric solution is prescribed in testing, the equivalent of 1 c.c. of the normal solution to be employed is stated in brackets, e.g. (1 c.c. of normal volumetric solution of sodium hydroxide=0.1 gram of camphoric acid, or =0.09005 gram lactic acid, or =0.06302 gram nitric acid). The impurity to be detected by a given test is also stated in brackets. In the case of drugs, it is interesting to note that in the text the Latin botanical name is followed by a statement of the habitat or origin of the official plant, and it may be mentioned that in several instances plants of Norwegian origin are specified; this is the case with arnica chamomile, digitalis, hyoscyamus, bearberry, caraway, wormwood, cynoglossum, etc. The Orchis varieties yielding salep are described as "indigenous to Asia and Europe, also Norway." The monographs on fluid extracts state the specific gravity and the percentage of dry extract yielded on evaporation.

ESSENTIAL OILS.

The figures given for the optical rotation of the official essential oils differ slightly from those stated in the B.P.:

| Norwegian | British |
|------------------------------------|---------------------------------------|
| Pharmacopæia. | Pharmacopaia. |
| Ol. anisi20° (not more) | $-2^{\circ} \text{ to } +1^{\circ}$ |
| (doubtless a printer's error: -2°) | |
| Ol. carui +70° to +80° | $+75^{\circ}$ to $+82^{\circ}$ |
| Ol. coriandri + 8° to +13° | $+58^{\circ} \text{ to } +64^{\circ}$ |
| Ol. fœniculi +12° to +24° | $+ 8^{\circ} \text{ to } +14^{\circ}$ |
| Ol. lavandulæ — 3° to — 9° | _ |
| Ol. limonis +58° to +65° | -3° to -10° |
| Ol. menth. pip25° to -20° | -20° to -25° |
| Ol. rosmarini not more than +15° | $-2^{\circ} \text{ to } +15^{\circ}$ |
| Ol. santali16° to -20° | $-13^{\circ} \text{ to } -21^{\circ}$ |

Cinnamal is described as an aldehyde obtained synthetically or from the bark of Cinnamomum Cassia; eucalyptol as the principal constituent of the essential oil obtained from Eucalyptus or Metaleuca varicties; eugenol as the chief constituent of the essential oil distilled from cloves. Of interest is the inclusion of suprarenin bitartrate, described as ortho-dioxyphenyipara-æthanol-methylamin bitartrate, the bitartrate of synthetic levogyrate suprarenin. Melting-point, 149°. One part corresponds to 0.55 part of suprarenin.

CHEMICAL TESTS.

Among the tests for the purity of cocaine hydrochloride the quantities prescribed for performing the Maclagan test have been slightly altered: 0.1 gram of cocaine hydrochloride is dissolved in 85 c.c. of water and 0.2 c.c. of solution of ammonia being stated. "Chloroform," and choroform for narcosis, are required to contain 1 to 0.6 per cent. of alcohol. Benzoic acid is required to be obtained by sublimation from benzoin free from cinnamic acid, at a temperature not exceeding 160° to 180°. One gram of magnesium carbonate should require for neutralisation at least 20 c.c. of normal volumetric hydrochloric acid, 1 c.c. of the latter corresponding to 0.02016 gram of magnesium oxide. Silver nitrate is tested volumetrically; 1 c.c. of 1/10 normal volumetric solution of sodium chloride corresponding to 0.016989 gram of silver nitrate, using potassium chromate as indicator.

The following test for the presence of sesame oil in olive oil has been included: If 10 c.c. of olive oil are shaken for 30 seconds with 3 drops of furfurol solution (1:50 alcohol) and 10 c.c. of hydrochloric acid (sp. gr. 1.19), the acid layer, after separation, should not assume a red coloration within five minutes. The test for the presence of cotton-seed oil is similar to that included in the B.P.; the amounts to be used, however, differing—viz.: 5 c.c. of olive oil, 5 c.c. of amylic alcohol, and 5 c.c. of a solution of 1 part of sulphur in 100 parts of carbon disulphide, and no coloration should appear within fifteen minutes. The presence of paraffin is to be recognised by heating 10 grams of olive oil with 10 grams of alcohol and a solution of 3 grams of sodium hydroxide in 10 grams of water; a clear solution should result on the addition of 100 grams of warm water.

Instead of indicating the melting-point of atropine sulphate, the Norwegian Pharmacopœia requires that the atropine, which separates out on adding solution of potassium carbonate to an aqueous solution of atropine sulphate and extraction with ether, shall have a melting-point of 115°.

In the place of the ammonia test for the determination of cinchona alkaloids other than quinine in quinine hydrochloride and sulphate, the following test has been adopted, the quantities referring to the testing of quinine sulphate:

One gram of crystalline, or 0.85 gram of the salt dried at 100° C., is placed in a weighed flask, 35 grams of water are added, and heated until solution has taken place. A solution of 0.3 gram of crystalline neutral pota-sium oxalate in 5 grams of water, and sufficient water to bring the weight of the contents of the flask to 41.3 grams, are added. After standing for thirty minutes at a temperature of 20° C, the contents of the flask are filtered through glass wool; on adding one drop of solution of sodium hydroxido (1:10) to 10 c.c. of the filtrate tho latter should exhibit no cloudiness after a few minutes.

The following formulas for some official preparations are of interest:

Cod-liver Oil Emulsion.

| Ol, morrh | | 400 grams |
|-------------------|------|-----------------|
| Acac. gum. pulv. | | 4 grams |
| Tragacanth, pulv. | | 4 grams |
| Gelatin. alb. | | 1 gram |
| Ol. menth, pip. | | 1 gram |
| Tinct. aromatic. | | 30 grams |
| Syrup | | 150 grams |
| Aq. dest. q.s. ad | | 1,000 grams |

The gum acacia and the tragacanth are mixed with the oil by shaking in a large, dry bottle, thereupon the cooled solution of the gelatin in 350 grams of water is added, and the whole shaken vigorously to produce an emulsion. The peppermint oil, mixed with the aromatic tincture and the syrup, as well as the remainder of the water q.s. to produce 1,000 grams are then added, and the whole well shaken.

Concentrated Infusion of Ipecacuanha.

One hundred grams of powdered ipecacuanha are moistened with 10 grams of normal volumetric solution of hydrochloric acid and 20 grams of alcohol (20 per cent.). This is transferred to a percolator and percolated with alcohol (20 per cent.) until 1,000 grams of percolate have been obtained. This concentrated infusion is to be used when infusion of ipecacuanha is prescribed, diluting it with the necessary amount of water unless otherwise indicated by the prescriber.

Concentrated Infusion of Senega.

One hundred grams of powdered senega-root are moistened with 30 grams of water and transferred to a percolator, and percolation is undertaken with water until 500 grams have been obtained. The first 150 grams of percolate obtained are set on one side, and 35 grams of alcohol (95 per cent.) are added to this portion. The remaining 350 grams of percolate are evaporated to 15 grams, and this residue is added to the first portion containing the addition of alcohol. Two grams of this concentrated infusion represent 1 gram of senega-root.

Asthma Powder.

| Opium puly Herb. lobel. puly. | | 2 grams |
|----------------------------------|------|-----------|
| Herb. lobel. puly. | | 100 grams |
| Fol. belladon, pulv. | | 150 grams |
| Fol. stramon. pulv. | | 550 grams |
| Pot. nitr. pulv | | 170 grams |
| Camphor, pulv | | 28 grams |
| Aq. dest | | q.s. |

The opium, lobelia, belladonna, and stramonium, with the rotassium nitrate, are mixed with 400 grams of warm water, the whole is then dried at a temperature not exceeding 60° C., whereupon the camphor is added and the whole well mixed.

Artificial Carlsbad Salt.

| Sod. sulph. exsicc. pul | v | | 44 grams |
|-------------------------|---|-----|----------|
| Sod. bicarbon. pulv. | | | 36 grams |
| Sod. chlor, pulv | | *** | 18 grams |
| Pot. sulph. pulv | | | 2 grams |

Six grams of this mixture dissolved in 1,000 c.c. of water yield a solution which contains approximately the amount of salts present in Carlsbad water.

Glycerin Suppositories.

| Glycerin | | 100 grams |
|----------------|------|---------------|
| Aq. dest | | 10 grams |
| Acid. stearic. | | 9 grams |
| Sod. carbonat. | | 5 grams |

The sodium carbonate is dissolved in the water and mixed with the glycerin, the mixture is heated on a water-bath, and the stearic acid added. The whole is further heated until no more carbonic acid is evolved, and the weight made up, if necessary, by the addition of glycerin to 100 grams.

Syrupus Hypophosphitum Compositus.

| Calc. hypophosph | | 20 | grams | |
|---------------------|------|-------|--------|--|
| Pot. hypophosph | | 10 | granis | |
| Ferr. hypophosph | | 2 | grams | |
| Mangan, hypophosph. | | 2 | grams | |
| Quinin. hydrochlor. | | 2 | grams | |
| Sod. citrat | | 3 | grams | |
| Acid. citric | | 2 | grams | |
| Strychnin, nitr. | | 0.0 | 5 gram | |
| Aq. dest: | | q.s. | | |
| Sacchar, | | 600 9 | grams | |

The salts and the citric acid are dissolved in water at 50°C., so that after filtration 400 grams of filtrate are obtained, to which the sugar is added and allowed to dissolve by digestion. Sp. gr. 1.32 to 1.34.

Tinetura Aromatica.

25 grams 25 grams 25 grams 25 grams Cardamom. pulv. ... Caryophyll. pulv. ... Galangal pulv. Zingiber. pulv. Cinnamon. Ceylon. pulv. ... 100 grams Alcohol (65 per cent.) sufficient to produco by percolation 1,000 grams of tincture.

Sp. gr. 0.910 to 0.920. Residue on evaporation not less than 2 per cent.

The volume includes among the appendices a table of atomic weights, a list of chemical reagents, a list of reagents required for the analysis of urine, blood, stomach contents, and stains employed in bacteriological work. Further, tables showing the specific gravities and percentages of various concentrations of alcohol, some acids and alkalis; the number of drops representing 1 gram of certain official fluids; the maximum doses of drugs and preparations; poisons to be kept separate; lists of the articles omitted, and of those added in the present edition; the specifications adopted by the Brussels Conference on "heroic" drugs; Latin and Swedish drugs; Latin and Swedish indices.

2. The Finnish Pharmacopæia.

Under the Russian régime Finland enjoyed autonomy in pharmaceutical matters, retaining its own system, curriculum, and Pharmacopæia. In 1906 the Finnish Senate appointed a committee to elaborate a new edition of the Pharmacoepia, to replace the one in force since 1885, and the now official work, the fifth edition, became the legal standard for Finland on January 1, 1915. Already its external appearance differentiates it from the Pharmacopæias of other countries; it is considerably smaller, containing only 400 pages, and is handsomely bound in pliant, black leather, with the title "Finska Farmakopén' impressed in gold lettering, supported in the upper left-hand corner with the emblem of pharmacy and medicine—the staff of Æsculapius, which in this case is crowned by a goblet into which dip the two snakes' heads. If the first impression already strikes a pleasing note, a study of the contents of this volume-which unconsciously reminds one more of a well-bound classic, or indeed of a large prayer-book, than of a serious official publication—bears evidence that our Finnish confrères are abreast of modern pharmaceutical progress.

In the preface the names of the authors are given, which include four professors, representing pharmacology, medicine, botany, and pharmacognosy; two communal physicians; while practical pharmacy is represented in the persons of the inspector of pharmacies attached to the medical board, two owners of pharmacies—one in Helsingfors and the other in Brahestad (a town of some 3,600 inhabitants founded in 1649 by the popular Swedish Viceroy of Finland, Count Per Brahe, and situated at the northern extremity of the Baltic, some 130 miles south of the Arctic Circle)-in addition to-and here we must remember that the work was elaborated in the days when Tsarist autocracy ruled-two pharmaceutical assistants, non-proprietors.

The Swedish language has been adopted throughout for the descriptive text, etc. The titles are in Latin, identical in construction to that adopted in the Norwegian Pharmacopæia (with the exception that we find the usual forms of aqua, liquor, unguentum), with the Swedish and Finnish names included as sub-titles, thus: Folium Hyoscyami—Bolmörtblad (Swedish)—Villikaalinlehti The introduction contains practically the (Finnish).

same information as is found in the prefatory remarks to the Norwegian Pharmacopæia; one rule included here. however, requires that medicines made up on a vetermary surgeon's prescription shall bear the words "För djur (=for animal).

OMISSIONS AND ADDITIONS.

In the present edition 137 articles have been omitted, while 162 have been added. This large number of additions is explained by the fact that thirty years had elapsed since the previous edition was published, and among the new preparations figure such veterans of our materia medica as: Acetanilid, adeps lanæ, antipyrin, nine fluid extracts (a form included for the first time), cocaine-hydrochloride, phenacetin, rhizoma hydrastis, vaseline. With regard to the newer synthetics which have been included, in numerous instances the protected name has been adopted as the official title, otherwise the protected designation appears as a synonym, with the Swedish and Finnish sub-titles. In this respect the authors of the Finnish Pharmacopæia have shown themselves to be less conservative than their Norwegian confrères, as will be apparent from the following list enumerating some of themore important additions:

Acid. acetylsalicylic. Acid. diæthylbarbituric. Æthylmorphin. hydrochlor. Arecolin. hydrobrom. Benzonaphthol Camphor. monobrom. Codein. phosph. Creosote carbonate hydro-Diacetylmorphine chlor. Hexamethylenetetramin Hydrargyr, tannas Menthol Novocain. hydrochlor. Protargol

Pyramidon Quinin, æthylcarbon. Quinin, hydrobrom. Quinin, tannas Resorcin Salipyrin Sodium diæthylbarbitur. Strophanthus Suprarenin, hydrochlor. Tannalbin Tannoform Theobromin. sodio-salicyl. Thymol

In the descriptions of chemical substances the chemical formula is given, but not the molecular weight of the compound. The impurities to be detected are stated in brackets, and in the case of tests involving the use of a volumetric solution, the indicator to be used is given in brackets. On the other hand, the amount of the acid or base corresponding to 1 c.c. of the volumetric solution employed is not always stated, and the tenor of each article is brief and decisive in style. Special attention has been paid to the description of the characters of the official drugs: thus a whole page is devoted to the morphological and microscopic characters of cascarilla, cinchona, belladonna, digitalis, capsicum, marshmallow-root, including the microscopic picture presented by the powdered drug. Where the determination of the iodine index is required, the amount of oil to be employed for applying this test is stated—e.g., Ol. theobrom., 0.6 gram; ol. morrh., 0.2 gram; ol. lini, 0.15 gram; ol. oliv., 0.4 gram.

The melting-point of atropine sulphate is given as about 183° C. Another example of the absence of uniformity in nomenclature is to be found here under the title of "Acetic Acid," which applies to an acid with a content of 25 per cent. of hydrogen acetate. The Finnish "Phosphoric Acid" has a content of 25 per cent., and the same standard has been adopted for hydrochloric and nitric acids. (The "Phosphoric Acid" of the Belgian and Norwegian Pharmacopæias is 10 per cent., of the Spanish, French, and Italian 50 per cent., and United States 85 per cent.) The Finnish solution of morphine hydrochloride contains 3 grams of morphine hydrochloride in 100 grams (B.P.: 1 gram in 100 c.c.); the solution of potash=25 per cent. KOH. Formulas are included for the preparation of mercurous and of mercuric iodide. The solution of mercurous nitrate is prepared by digesting mercury with nitric acid (25 per cent.); the crystals which separate out are washed with dilute nitric acid (1 part of 25 per cent. acid and 5 parts of water), and dried by means of filter-paper, then they are dissolved in the ratio of 1 part of crystals of mercurous nitrate in 9 parts of dilute nitric acid (1 part of 25 per cent. acid

and 25 parts of water).

THE OPTICAL ROTATION.

The figures for the official essential oils are collected to a special table:

| | | Finnish | British |
|-----------------|-----|--------------------|---------------------------------------|
| | | Pharmacopæia, | Pharmacopaia. |
| Ol. anisi | | up to -2° | -2° to $+1^{\circ}$ |
| Ol. caryophyll. | | up to -1° 25' | _ |
| Ol. cinnamom. | | - 1° to +1° | $-0.5^{\circ} \text{ to } -1^{\circ}$ |
| Ol. fœniculi | | +12° to +24° | - |
| Ol. limon | | +58° to +65° | +58° to +64° |
| Ol. menth. pip. | ••• | lævogyrate | $-20^{\circ} \text{ to } -35^{\circ}$ |
| Ol. santal | | -16° to -20° | · -13° to -21° |
| Ol. terebinth. | | +15° to -40° | _ |
| | | | |

Posology.

In addition to practically the same set of tables as are included in the Norwegian Pharmacopæia, the Finnish work contains, a table indicating the specific gravities of official liquids at 15°C., giving against each the coefficient to be added, or subtracted, for each degree under or above 15°C. Further, a most useful table is included, giving the maximum single dose of a number of drugs for full-grown animals—viz., for horses, cattle, sheep, pigs, and dogs. The following are some of the maximum doses stated in this interesting tabulation:

| maximum doses stated in t | iiis iiiccica | ouring ou | Dalation | |
|----------------------------|---------------|-----------|-------------|-------------|
| (Dose in grams)—Hor | ese Cattle | Sheep | Pig | Dog |
| | .5 0.5 | 0.02 | 0.05 | 0.005 |
| Acid. diæthylbarbitur | | _ | | 0.75 |
| Acid. hydrochlor. (25%) 20 | 30 | 5 | 3 | 0.2 |
| 4 17 1 | | 5 | J | 0.5 |
| | | | 10 | |
| A / | | 20 | | 3 |
| Antimon, sulphur. 25 | | 5 | 5 | 0.2 |
| Antimon. tartar 10 | | 2 | 2 | 0.3 |
| | ·05 0·05 | 0.01 | 0.05 | 0.003 |
| | .08 0.08 | - | _ | _ |
| Atropin. sulph 0 | ·1 0·1 | 0.05 | 0.03 | 0.02 |
| Bismuth. subnitr 15 | 25 | | - | 2 |
| Camphor 15 | <u> </u> | _ | _ | 2 |
| Cantharis 2 | . 5 | 0.5 | 0.5 | 0.5 |
| Chloral hydras 125 | | 10 | 10 | 5 |
| Chlor f. pro narcos 100 | | 30 | 30 | _ |
| Cocain, hydrochlor, 0 | 5 — | _ | _ | 0.15 |
| Codein. phosph — | _ | | | 0.5 |
| Ergot 25 | 50 | 10 | 5 | 2 |
| Ti | | 10 | 5 | 1·5 |
| T3 (011 1 | 30 | 10 | o o | 5 |
| | 15 | _ | _ | 0.2 |
| | | 1 | 1 | |
| | 6 — | | | 0.12 |
| Ol. croton 0 | | 0.5 | 0.4 | 0.5 |
| Opium 20 | 25 | 3 | 3 | 0.5 |
| Phenacetin — | _ | - | _ | 1 |
| Pilocarpin hydrochlor 0 | | 0.05 | _ | 0.05 |
| Pot. iodid 10 | 10 | 5 | 5 | 1 |
| Quinin. hydrochlor 20 | 25 | 5 | 2 | 1 |
| Rad. ipecao | _ | | 5 2 3 | 1 3 5 |
| Rad. valerian 50 | 100 | 15 | 10 | 5 |
| Rhiz. veratrum | 10 | 5 | | _ |
| Sod. salicyl 50 | 75 | 10 | 2 5 | 2 |
| | 08 0.15 | 0.002 | 0.005 | 0.003 |
| Sulphonal | - | _ | _ | 4 |
| Suprarenin, hydrochor. | | | | Ψ . |
| (1:1000) 2 | 5 3 | | | 0.5 |
| Tinet digital '00 | 20 | 5 | 5 | |
| Trimot andi | 150 | | 5 | 1 5 |
| | | 30 | 25 | 0 |
| Tinct. strophanthi 20 | 20 | 5 | 5 | 1 |
| Tinct. valerian 50 | 50 | 10 | 5 | 2 |
| Tinct. veratri 8 | 20 | 5 | 2 | 0.03 |
| Veratrin 0 | 2 0.2 | 0 02 | 0.03 | 0.002 |
| | | | | |

Liquid Iodoform.

A SPANISH FORMULA is given for the preparation of liquid iodoform:

| _ | | Grm | is. | | Grms |
|-----------------|-----|-----|------------|------|------|
| Potass. hydrox. | ••• | 7 | Oleic acid | | 100 |
| Distilled water | ••• | 5 | Iodine | | 60 |
| Alcohol (90%) | | 7 | 1 | | |

The potassium hydroxide is dissolved in the water, and the oleic acid and alcohol added; then the finely powdered iodine is gradually added to the mixture in small quantities. At the conclusion of the reaction the liquid has a light brown colour; it is allowed to stand for a few days in the dark, when the supernatant liquid portion is poured off. This is light yellow in colour, and soluble in water, ether, chloroform, and fatty oils.

Association Affairs.

Dover.—A meeting of the Dover Chemists' Association was held on June 18, at which all the proprietor pharmacists of the borough were present. Mr. R. M. Ewell was elected President, and Mr. E. W. Ewell re-elected Hon. Secretary and Treasurer. It was resolved to form a proprietor section, and that efforts be made to join with other proprietor pharmacists in East Kent to form a district association for the purposes of the South-Eastern Federation of Pharmaceutical Associations. The question of a minimum charge for dispensing was deferred until a later date, but it was agreed to mark prescriptions with the date and price charged, using "Bishopgate" as a code word. After a long discussion it was not thought advisable to adopt a price list as an agreed minimum at present, but it was decided to charge according to the "British and Colonial Pharmacist" list wherever possible.

Drug Union.—The Amalgamated Society of Pharmacists, Drug and Chemical Workers (London Retail Branch) met on June 13. The financial statement which was placed before the members was found to be satisfactory. The recent advance in wages secured by the wholesale section and the forthcoming meeting between the National Executive and the Local Associations Executive provided the subjects of a general discussion.

Hampshire.—The Hampshire Pharmacists' Association held their quarterly meeting on June 16, the President, Mr. E. H. Smith (Gosport), in the chair. The President and secretary reported on the meetings of the South-Eastern Federation. It was decided to recommend that the expenses of delegates should be paid by the Federation, and not by the Local Association; if necessary, the amount of the levy to be raised. The secretary reported that about half of the members had agreed to adopt the Minimum Retail Price List for dispensing. Further discussion was postponed. The secretary reported on the Harrison Memorial Fund, and 21, 2s, was voted from the funds of the Association. On the question of local yar records, it was decided that the work of compilation would be impossible in the area covered by this Association.

London (Co.).—A meeting of the Executive Committee of the London County Pharmaceutical Association was held on June 15, Mr. G. B. Barnard (Presideut) in the chair. A letter from the Early Closing Association regarding the Early Closing Bill was received, and the secretary reported on the constitution of the London County Executive for 1920-21. The Committee appointed Mr. Gilbert Jones as auditor for 1920. The report and financial statement of the Local Associations Executive for the period ended December 31 was received. The report of the Organisation and Trade Sub-Committee contained information concerning the position regarding certain proprietary preparations, and the recommendations were adopted. The report of the Pharmaceutical Insurance Sub-Committee was also adopted, and a discussion took place on the question of reopening negotiations with the Ministry of Health. The secretary was requested to communicate with the Local Associations Executive giving expression to the views of the Committee.

London (N.E.).—The general meeting of the North-East London Pharmaceutical Association was held on June 17, Mr. G. B. Barnard in the chair. A balance in hand of 4l. 12s. 9d. was announced, and afterwards the following officers were elected: President, Mr. J. A. Thompson; Viee-President, Mr. C. M. Holmes; Joint Secretaries, Messrs. W. A. Scott and C. E. N. Fox; Treasurer, Mr. W. Wells; Trade Secretary, Mr. F. B. Elwell. Mr. C. E. N. Fox was elected in place of Mr. Scott on the London County Executive Committee.

Sheffield.—The annual meeting of the Sheffield Pharmaceutical and Chemical Society was held recently, at which Mr. E. Preston presided. The report showed an increase of members, and the balance in hand was stated to be 7l. 19s. 10d. Messrs. H. Bown, H. B. Hammond (a new member), J. Gilbert Jackson, J. A. Johnson, E. H. Swift, and H. G. Williams were elected to the Council.



Our Town Traveller.

After an interval of some years the C. & D. Man resumes his Visits to Business Houses in London.



IT would not be difficult to write a long article about the changes which have taken place since this feature of THE CHEMIST AND DRUGGIST was suspended, but it will suffice to record the impression that the oscillations of trade unrest are less pronounced and there is now greater promise of stability in conditions. But pre-war prices will never again rule in products that involve the employment of a fair proportion of labour. The price of raw materials is also permanently enhanced, so that no relief from high prices can be expected. Passing the manufacturing costs on to the public is the crux of the position. It occurred to me that it would be interesting to inquire whether some of the new British industries are in a healthy condition.

BRITISH-MADE CHEMICALS.

A call at the works of Thomas Tyrer & Co., Ltd., Sterling Chemical Works, Stratford, London, E., elicited the fact that the company are still conducting their business on the lines laid down by the late Mr. Thomas Tyrer-i.e., the maintenance of quality, combined with the highest business integrity, of which principles the founder was a leading exponent. It may be recalled that shortly after the outbreak of the war the Government took over the company's factories, and Mr. Tyrer's invaluable services were drawn upon to their fullest extent. It was largely through his instrumentality that the supplies of cellulose acetate were assured at a very critical period, and subsequently the demand for the "dope" became so large that a special factory was erected at Richmond to deal with this alone, and ultimately an approximate output of 60,000 gallons a month was reached. This, however, was only one side of the war-work, as the company's laboratories and staff were requisitioned in arsenal research of an important character, and problems which baffled Government chemists were elucidated at Stratford. Heavy arrears of work had to be faced when the war terminated, but the change over was satisfactorily accomplished, and the company has now a normal production of bismuth salts, mercurials, hypophosphites, scale preparations, resublimed iodine, exsiccated salts, and the usual run of pharmaceutical chemicals. Among the products now manufactured and of which Germany was the only source of supply prior to the war, mention may be made of camphoric acid, the output of which has stead.ly increased, and as the production is on a permanent basis, it will not be necessary to revert to pre-war sources. Sodium sulphide for photographic work is a new industry which the company developed during the war. Mention may also be made of cobalt salts, part cularly the chloride, acctate, and oxide, in which a large business has developed. The manufacture of hypophosphites is essentially a British industry, and the company's output is now quite sufficient to take care of the home and export demand without resort to foreign sources. The resumption of the manufacture of phosphoric acid, which was practically unprocurable during hostilities, has been resumed, and supplies are again normal. Mr. Thomas sumed, and supplies are again normal. Tucker, F.C.S., who has been thirty-odd years with the the death of Mr. Tyrer, and we gather from him that a to labour and other essentials, sufficient amidol was rapidly further extension of the business is in contemplation, prepared to meet the demands of the Royal Air Force. some idea of which is given in the illustrations in our Even before the factory was roofed the workers were advertisement section.

Photographic Developers.

A short 'bus-ride brought me to Cross Street, Finsbury, where Johnson & Sons (manufacturing chemists), Ltd., have their head office. There I saw Mr. Curtis, who has been twenty-five years with the house, and who has seen the science of photography and the manufacture of its



FIRST AMIDOL BUILDING, 1916.

chemical accessories grow from what might pardonably be described as a luxury trade to its present important posi-tion as one of the Empire's "key" industries. This growth has naturally been of great rapidity during the war period, and Johnson & Sons have in this connection a story to tell which takes a worthy place in the annals of British achievement. In response to my request for an historical note, my guide dated the actual inception of the British manufacture of amidol from 1915. At that time, he explained, stocks were running low, and Johnson & Sons were "mobbed" for amidol by the newly constituted Air Board, as well as by the trade generally. After commenting on the primitive photographic equipment of the Forces at the period, I was told that the first batch of amidol was made at the City works of the company. Early in 1916 a site for an amidol factory was



PRESENT BUILDING FOR MANUFACTURE OF PHOTOGRAPHIC FINE [Taken from an aeroplane.]

company, succeeded to the position of general manager on found at Hendon, and despite great difficulties in regard busy. The troubles seemed to have been overcome, when

the call for metol came from "across the water." At that time the cinematograph industry had a tidal wave of prosperity, and film-makers would have paid any price for metol. But when a hundredweight of metol was asked for, 7 bb. was supplied, for Johnson & Sons placed patriotism first, and after the needs of the Army were met metol and "hypo" were rationed even before the Government gave orders to do so. In addition to the R.A.F., the Army Medical Department, the Censor's Office, and indeed all branches of the Service made insistent demands for metol. The A.M.D. requirements were fortunately easily met with a special developer which Johnson & Sons had introduced before the war for x-ray work. But something had to be done for the others. So experimental plant was laid down, and, as a result, by the end of 1917 it was again possible to satisfy all the demands for war purposes and allow of 5 per cent. of the output being allotted to the trade, At this time also, of nineteen contract awards Johnson & Sons secured seventeen-a very creditable performance. Demands for more and still more amidol and metol were forthcoming, however, as the Allied armies grew, and both the Canadian and Australian Forces required large quantities for their photostatic departments, which photographed every document, including soldiers' pay-sheets, to outwit "artful dodgers" as well as to save time in copying and eliminate error. But just then the Gothas were paying unpleasantly frequent visits to England. If the works were bombed, what then? A conference between Mr. Curtis and the Air Board resulted in a guarantee that from three to six months' supply would be stored in bomb-proof vaults at Oxford. Huge orders on account of the American army were also met, and indeed none of the Allies was ever disappointed-truly an astonishing achievement.

Since the Armistice Johnson & Sons have been filling trade orders, and during 1919 were able to meet every demand. "Good wine needs no bush," and products which have helped so considerably to bring about the great victory need no higher recommendation. "Metol Johnson" can be used in any standard formula. This product of the company (to give it its chemical name, p-methylamino-hydroxybenzene sulphate) has the white crystalline form of the imported substance of pre-war days, and, it is unnecessary to add, is of the highest possible purity. It has proved itself the best for x-ray work and cinematography. Amidol was found to be the premier developer for papers in most photographic work, especially in that connected with the war, as by its use thousands of prints can be easily and economically made from a negative in a few hours, while no other developer has proved so efficient for the important work of enlargement.

The future will see a struggle for supremacy between the British products and those of German origin. But Johnson & Sons are well prepared, and, having accomplished so much, are confident of holding their own, if consumers do their part. A fourth amidol and metol plant is projected, so that supplies of British made chemicals are not likely to be short. I saw some interesting lantern-slides developed with "metol Johnson" and illustrating the war in various phases. There must be many chemists' associations which would appreciate a lecture on the subject, I thought. An interesting letter, dated December 28, 1918, from the Air Ministry is one of the proud possessions of the company, and, mounted in a gilt frame, occupies a place on the office wall. I cannot do better than reproduce it:

I am asked to convey to you the best wishes of the season from this Department, and at the same time the expression of our gratitude for the remarkable way in which the supply of chemicals to the Photographic Braneh of the Royal Air Force has been maintained. The energetic manner in which the manufacture of "Metol" has been taken up by you does, in itself, deserve the highest praise, but not only this, the cares of this Department have been considerably lightened by the fact that we could rely on a steady supply without fear of interruption throughout the whole period. Furthermore, the quality of the chemicals supplied has never failed us, and has always engendered the highest confidence in the Field in every theatre of war.

I was afterwards conducted to the stock-rooms, where I saw the various packed products of the company. Developers of all kinds and in every form (powder, tablets, and liquid) are provided in packings designed to guard the contents from deterioration. As a world-wide business is aimed at, labels are, or will be, printed in English, French, Italian, Spanish, Russian, etc. In reply to my query as to whether Johnson & Sons are making hydroquinone and other developers, I was assured that small lots have been made, and that every difficulty in the manufacture of photographic developers had been overcome. When the need arises, therefore, the company is confident that any developer can be prepared in quantity and quality sufficient for every requirement.

SCIENTIFIC GLASS-BLOWING.

On calling at John Tye & Sons, glass-blowers, Caledonian Road, London, N. 7, I found Mr. W. A. Whatmough, B.Sc., Ph.C., and Mr. Keith having a discussion over the recently invented patent blow-pipe burner. These burners were evolved as the result of contracts undertaken by the firm for the military authorities during the war. The burner has a needle-shaped flame of high velocity and temperature, thus doing away with the usual multiple-jet system previously in use for "cutting in." The chief feature of the burners is that a mixture of gas and air is preheated, the result being that a flame of high velocity, which does not "blow off" or become ragged, is produced. Before starting on a tour round the factory Mr. Whatmough explained that when they took the building in 1915 there existed nothing but four bare walls, and now, as I saw, the place is a "hive of industry." The present lamp-blown glassware business is the outcome of the millions of iodine ampoules and thousands of mine-horns manufactured here during the war. Starting my itinerary at the store-room, where the glass is sorted out in diameters of 2 mm., and there is a good stock of both white and amber varieties, I proceeded to the "cracking-off" room, where several girls are employed cutting tubing into various lengths preparatory to it being made into test-tubes and tablet-tubes. In the long room on the ground floor a number of girls were busy blowing all kinds of glassware. One was making, by machinery, tubes for photographic tablets, consisting of a tube about four inches long, in which there is a partition to separate one chemical from another. A second operator was blowing nasal douches, a third chloroform tubes; but to my mind the most interesting operations were those involved in the making of Schuster's flasks. At another bench a kind of ampoule in the shape of a watch-pocket flask was being made. These are filled with a concentrated perfume, sealed, and then coated with gelatin. Leaving this room, I inspected the annealing machine, another recent invention, and was shown in a polarising apparatus tubes before and after being annealed. Mr. Whatmough expects in a very short time to be able to supply machine-made test-tubes finished equal to any ever turned out by Germany, and of a harder variety of glass.

Another Chat with "Eno's."

Ascending skywards in the lift which takes one comfortably up to Messrs. Eno's spacious offices at Blackfriars House, E.C., I had in mind the end of a conversation reported in the C. & D. some weeks ago, when I left one of the directors full of enthusiasm for the new policy of the company. It was natural enough that we should resume our conversation where we left off. National advertising—i.e., advertising on a national scale—was the keynote of our talk on the present occasion, and the advantages of such advertising to the retailer may be summarised in the following outline:

To-day is the day of the nationally advertised proprietary article of undoubted reputation, because such an article—backed by an aggressive advertising policy—is bound to create a constant demand, and, incidentally, to bring profitable business to the retail chemist. But it would seem that the retailer often prefers to sell an unadvertised article, occasionally, at an abnormal profit,

rather than sell, frequently, a well-advertised article bearing a reasonable profit. (I may interpolate the remark that "abnormal" profits do not commend themselves to Profiteering Committees.) It is a short-sighted policy to attempt to ignore or deflect popular demand, and the retailer who pursues this policy will sooner or later realise the fallacy of endeavouring to push unadvertised products to the detriment of the systematically advertised article. At the back of the nationally advertised product is the reputation of the manufacturer whose good name is his greatest asset. The national advertiser must therefore stand or fall by the quality of his product. The retailer who argues to a prospective customer that the latter merely "pays for advertising"—and then endeavours to sell something else "just as good"—is using a dangerous weapon. The mere fact that advertising increases the demand for an article enables the manufacturer to effect tremendous economies in the cost of production, and makes it possible to sell to the public at a lower margin of profit. Take the case of Eno's Fruit Salt. In spite of the enormous increases in the costs of raw material, wages, upkeep of plant, transport, and so forth, the selling-price of this commodity to the public has only advanced very slightly. This result has been achieved by adopting scientific methods of production and distribution. The retail chemist is an indispensable factor in the scheme of distribution, and his profit is both definite and remunerative. It pays him far better to hand over the counter a quick-selling product for which a universal demand always exists than to dispense a prescription which carries an inadequate to dispense a prescription which carries an inadequate profit. Moreover, his capital is not tied up in slow-moving stock. Apart from this, national advertising creates new customers. The necessity for mutual cooperation between the retail chemist and the national advertiser is (or should be) obvious. The latter is usually only too willing to provide the retailer with various kinds of attractive window- and counter-display material. retailer is the connecting-link between the great national advertising campaign and the buying public, and by encouraging the use of this form of publicity in his shop he is indirectly informing the public that he is a progressive business man.

Toilet Preparations.

In the course of a chat with Mr. Davis, of T. Christy & Co., Old Swan Lane, London, E.C. 4, I learned that the general decline in business has not been felt by this firm, who report that the sale of most of their lines is increasing daily. This is particularly noticeable in the



A FORHAN'S WINDOW DISPLAY.

case of Forhan's, the dental cream, referred to recently in the C. & D., which takes its name from the inventor, a dental surgeon in the United States, and is used as a preventive of pyorrhæa. Miller's Musterole, a clean white ointment designed to replace the old-fashioned mustard plaster, which was also placed before C. & D.

readers, is taking on wonderfully well. Quin Quenna advertising is as varied as ever. Apart from the new diamond display card, showcards and window and counter exhibits are supplied with orders for Quin Quenna. Conversation then turned upon Nyal preparations, and Mr. Davis told me that, although there is still considerable difficulty in obtaining supplies, the firm have a fair stock of the face-cream, hairsutone, and cherry cough cure. The face-cream is an excellent preparation, leaving no waxy appearance on the skin. I was then introduced to "Purity Pansy," who will shortly be sent round to chemists, and should, so far as Zepto sales are concerned, prove a valuable assistant. Finally, I was shown a sample of Sapinol Rose, a new day cream, retailing at 1s. 9d. a jar. It is packed in an opal pot with an aluminium top. The cream itself is coloured a delicate flesh tint and nicely perfumed. It is well worth adding to stock, and, with the handsome showcard, should sell well.

Medical Gleanings.

Therapeutic Uses of Carbon Tetrachloride.

According to Dr. Jacquemet, carbon tetrachloride is an excellent antiseptic, and a solution of it containing iodine 1 per cent. w/v is useful in preparing surgeons' hands and the field of operation. As a parasiticide or in dermatology it may be employed either alone or with equal parts of xylol or ether.

Lemon-Juice Tablets containing Vitamine.

A METHOD for the preparation of a Lemon-juice tablet rich in antiscorbutic vitamine has recently been devised at the Royal Naval Medical School, Greenwich. The lemon-juice is first strained through muslin, then filtered under reduced pressure. The filtered juice is evaporated in vacuo over sulphuric acid at 15° C. The residue of nor-crystallisable syrup is made into a mass with a mixture of milk-sugar 97 per cent. and gum tiagacanth 3 per cent., and cut into tablets, so that each tablet contains the juice of half a lemon.

Determination of Axis in Astigmatism.

The "American Journal of Ophthalmology" describes the following method of determining the exact ax's in astignatism which was mentioned at the last St. Louis ophthalmic conference: After the best obtainable vision is secured by placing before the eye the combined lenses, remove the cylinder and replace it, in the supposed axis, by a cylinder a half diopter, or more, stronger; then, by rotation, determine whether or not the vision is improved. With an intelligent patient permit him to rotate the cylinder in order to secure his best acuity. Replace the proper cylinder in the new axis, which will prove to be the correct one.

Solutions of Homatropine in Ophthalmology.

The disadvantages of the use of an aqueous solution of homatropine owing to its cost and the amount wasted when obtaining cycloplegia were the subject of some remarks by Mr. J. Harman at a lecture delivered at the West London Post Graduate College recently. To overcome the waste he suggested an aqueous solution rendered so viscid by the addition of gum arabic that it could be lifted in drops with a narrow probe. This gummy solution must be made antiseptic, and the addition of menthol gr. 2, oil of wintergreen m. 2, and tincture of iodine m. 2 to a pint of water makes an efficient preservative. A solution in castor oil is the most convenient and most active, but needs careful preparation, as if too strongly heated some of the homatropine will be reconverted to atropine, and consequently some of the advantages of the former will be lost.

Local Holidays.—During the last week in July the shops in Keighley and Skipton will be closed, in observance of a local general holiday, at the suggestion of the respective chambers of trade.



Notes on Novelties

and Other Trade Matters.



SANAGEN WINDOW SHOWS.

The Sanagen Co., Ltd., Sheepcote Lane, Battersea, London, S.W. 11, manufacturers of Sanagen Nerve Food, have a staff of window-dressing experts at the service of chemists. A number of London retail businesses have already taken advantage of the offer, and chemists who desire expert assistance should get in touch with the company's display department.

JOHN BOND'S "CRYSTAL PALACE" MARKING-INK.

The necessity for marking linen sent to the laundry was never more pressing than to-day, in view of higher costs and inferior service. On this account John Bond's "Crystal Palace" marking-ink is acquiring a fresh lease of popularity. The retail prices are now 6d. and 1s., and it must not be sold below $5\frac{1}{2}d$. and 11d. With the 1s. size a turned-wood writing-tablet is supplied, which keeps the linen flat while it is being marked.

ELCO FOOT-TABS.

Evans Sons Lescher & Webb, Ltd., Liverpool and London, send us a sample tin of Elco Foot-tabs, which are employed for preparing an antiseptic and soothing foot-bath. The tablets are packed in a neat, flat tin, and three dozen tins are supplied in a display outer. The suggested retail price is 1s. each tin. Hawley's I.K., which the company are advertising in this issue, is experiencing an abnormal demand, which shows the necessity for keeping up stock of the preparation.

CACHETS "FINOT."

With the removal of war-time restrictions it is now possible to obtain adequate supplies of cachets. Cooper, Son & Co., Ltd., 80 Gloucester Road, South Kensington, London, S.W., send us samples of cachets of various sizes and colours which they can supply from stock. The cachets are well finished and can be had lettered with name and address of the chemist, or the name of the article contained in the cachet. There are seventeen sizes, and they can be employed on all the various types of cachet machines.

OPPENHEIMER'S PRICE-LIST.

The revised price-list just issued by Oppenheimer, Son & Co., Ltd., 179 Queen Victoria Street, London, E.C. 4, contains the new scale of trade discounts. Except in a few cases where the price is stated to be net or to be a protected price (P.A.T.A.), the prices in the list are subject to a discount of $17\frac{1}{2}$ per cent., and also a special discount of $2\frac{1}{2}$ per cent. on accounts paid within one month from date of invoice. Carriage is paid on orders of 10l., and half carriage on orders of 5l. The list consists of forty-seven pages, and after the wholesale prices suggested minimum dispensing-rates are given calculated to yield approximately 30 per cent. upon returns.

"THE STORY OF SNOUTWISKERS"

is the title of a booklet, with a coloured illustrated cover, issued by the London Hygienic Chemical Co., Ltd., Wansey Street Works, London, S.E. 17. It contains an interesting and informative account of the various rats and the part they perform in conveying disease to man. The booklet advertises Londovus, a vermin exterminator free of arsenic, phosphorus, strychnine, or other deadly alkaloids. From the company's advertisement in this issue we notice that a novel handwriting competition is being arranged for the general public with a view of advertising Londovus. A prize of 25% is also to be awarded to each of the three dealers from whom the winners of the three highest prizes purchased the r supplies.

HYGEX TOILET PREPARATIONS.

Since the note on Hygex toilet preparations appeared in the C. & D. (May 29, p. 62), Hygex, Ltd., 14a Atlantic Road, Brixton, London, S.W. 9, have sent us samples of the various articles. Hygex mouth-wash is an oxygenyielding liquid, put up in distinctive green bottles, with the neck at one corner. A sprinkler-top is fitted as a stopper. A mouth-wash preparation is also put up as a powder in packets, the contents of one of the envelopes being dissolved in a tumbler of warm water and used for rinsing the mouth. Hygex Ivy Powder, for use as a dental-plate fixative, is a pink powder put up in a round cardboard box fitted with a muslin sifter. Hygex artificial-teeth powder is in metal screw-capped bottles, packed in cartons. It has a distinctive odour and exceptional abrasive power.

SPIRIT REBATE.

One of our Scottish correspondents recently drew attention to the instructions issued by Duncan, Flockhart & Co., Edinburgh, for obtaining the rebate of duty on spirituous medicines. The firm have since sent us a copy of the memorandum referred to. It is recommended to employ sheets (these are supplied in packets) headed "Spirit Received," "Spirit Used," and "Spirit Claim for Rebate." Examples are given of how these are to be filled in, which makes the matter clear. Further notes are given regarding proof-spirit equivalents and B.P. dilutions. We have received also a copy of the firm's price list, which has recently been recast and improved in several ways. As an example of the useful notes which are incorporated we quote the following, which occur in juxtaposition:

Benzin.—Syn. Petroleum Spirit; Petroleum Ether; Benzolin. This differs from benzene in being a mixture of various members of the paraffin hydro-carbons—chiefly pentane C₅H₁₂, and hexane C₆H₁₄, having boiling-points ranging from 50° to 60° C., sp. gr. 0.670, 0.700. Requires less than its own volume of alcohol to make a clear solution.

tion.

Benzol 95 per cent.—Syn. Benzene; Rectified Benzol. Has a sp. gr. of 0.880 to 0.838, and the term 90 per cent, is a technical one and indicating that not less than 90 per cent should distil over at or under 100° C. Benzol is a mixture of members of the aromatic series benzene and toluene. Requires 6 vols. of alcohol to give a clear solution. Benzol must be carefully distinguished from benzin, q.v.

DUTCH CHLOROPHYLL.

Hiegentlich & Rose, Amsterdam, have attacked the problem of the supply in bulk of chlorophyll of standard quality. Mr. L. Hiegentlich, who was in London last week, has sent us a sample which chemical and physical analysis shows to be of good quality. The consistency is that of a thick syrup and the ash content low—1.12 per cent. Mr. Hiegentlich tells us his firm can supply in quantities of 500 to 1,000 kilos. Moreover, the chlorophyll is made from material grown in Holland, and the manufacture at Haarlem is conducted on such a scale that the Dutch product should be a serious competitor to other Continental makers. We found Mr. Hiegentlich ready to give us any information, so that we can testify to the fact that the members of the firm are Dutch-born and free from Teutonic taint—an additional reason why their chlorophyll should find acceptance in the drug-trade of the British Empire.

HANCOCK'S CENTENARY.

We referred recently to the centenary on June 12 of the establishment of the business of rubber manufacturers now carried on by James Lyne Hancock, Ltd., 266 Goswell Road, London, E.C. I. Since then we have received a copy of a reprint of the "Personal Narrative of the Origin and Progress of Caoutchouc or India-Rubber Manufacture in England," by Thomas Hancock. This was first published in 1857, and is now printed in facsimile as a souvenir of the centenary of the business which Thomas Hancock established exactly a century ago on the same site as that now occupied by the extensive works of James Lyne Hancock, Ltd. There is considerable fascination in reading Thomas Hancock's book, and one realises how complete was his study of the subject when it is considered that most of his processes are still in use. He was the inventor of vulcanising and the well-known rubber masticator machine. Copies of the book can be obtained at 3s. 6d. post free from the company.

AYRTON'S, LEMONADE TABLETS,

Ayrton, Saunders & Co., Ltd., Liverpool, have just brought out some new showcards to advertise Ayrton's lemonade tablets. The tablets, to which reference has been made in the C. d-D. on previous occasions, are packed in air-tight impermeable cardboard tubes, one tablet being the amount required to make a tumblerful of lemonade. The tablets dissolve readily. The beverage is particularly acceptable in the hot weather to outdoor



parties. One of the showcards forms the illustration to this note. The original is in appropriate colours, a novelty being introduced in the curved window portion representing the glass of lemonade. This gives a very realistic effect and at once attracts attention. The smaller card (14½ by 9½ in.), also in colours, represents two young people about to prepare lemonade by means of the tablets; the inscription is, "Ayrton's Lemonade tablets make really delicious lemonade, and children simply love it too.

Some Advertisements in this Issue.

The number of advertisements in this issue makes it unique in the annals of pharmacy, and sets an impossible task to our staff if an attempt is made to survey them We can promise both pleasure and profit to our readers who turn over the pages one by one and study the advertisements. From these new ideas will be gleaned

and fresh sources of supply suggested, to the mutual benefit of manufacturer and retailer. We have glanced through advance copies of the pages which the Publisher has given us, and notice many fresh points and developments in the various business houses. Some of these we indicate in the following notes, which it is understood make no pretence to exhaust the field of inquiry.

ARECO, LTD., 11 Southampton Row, London, W.C. 1, give interesting particulars of the toilet articles made by the company, and which are specially recommended.

THOMAS BIGG, LTD., Chemical Works, Church Street, Deptford, London, S.E. 8, offer John Peel Embrocation, which is priced to show a good profit. A scheme is outlined by which a bonus of John Peel Veterinary Embrocation is obstainable. tion is obtainable.

THE BRASS FLASK AND CAPSULE Co., LTD., Cox Street, St. Paul's, Birmingham, can promise early delivery of metal containers for toilet preparations. The address of the

containers for toilet preparations. The audits London office is given.

T. Heyden & Co., 113-122 Holborn, London, E.C. 1, advertise the French Phoenix safety razor, which is elaimed to be equal to any safety razor on the market.

C. I. Hood & Co., Lyd, Cecil House, Holborn Viaduct, London, E.C. 1, give the present retail and wholesale prices of Hood's medicine and the other specialities which they regulate the contraction.

of Hood's medical manufacture.

E. LLOYD, 63 Wednesbury Road, Walsall, illustrate a novelty in a combined safety razor and shaving brush. It is especially useful to tourists and travellers.

LYLCO, LTD., 43 Berners Street, London, W. 1, explain that the name Lyleo has been registered as a trade-mark for a new line of perfumes and toilet preparations. A list will be cent to applicants. will be sent to applieants.

Maclean's, Ltd., 6 Spring Street, London, W.2, introduce two new tubed products—emulsified cocoanut oil and midge cream—both with good selling potentialities.

MAYFAIR CHEMICAL Co., 11 Queen Victoria Street, London, E.C. 4, call attention to the Mayfair straw-hat dyes and the "Comet" vacuum flasks.

the "Comet" vacuum flasks.

Danto Rogeat & Cie., Lyons, invite applications to their London agents for their catalogue of enamelled chemical

Savory & Moore, Ltd., chemists to the King. 143 New Bond Street, London, W. 1, publish the new terms and wholesale and retail prices of their special preparations. Examples are given of carriage-paid assorted parcels for chemists.

SEYMOUR'S DISTILLERY AND HERB FARM, Holbeach, issue a challenge of a thousand pounds, to be paid to any charity, ctallenge of a thousand pounds, to be paid to any charky, if it can be proved that any adulterant or foreign oil is added to the peppermint oil produced on the farm.

B. C. Tipper & Son, Birmingham, call attention to Tipper's Cows' Relief for treating caked bag. Agricultural

The chemists should note this particularly.

Trans-Continental Agencies. Ltd., 14 Southampton Street, Strand, London, W.C. 2, proprietors of Dr. Hale's Vin-Sanguis, offer to pay the wine-liences of chemists who make all-the-year-round displays of their wine.

Wills.

MR. RICHARD AUGUSTUS JOSEPH BELL, Ferndale, Beckenham Grove, Shortlands, Kent, governing director of A. & A. Zimmermann, Ltd., chemical agents, who died on March 20, left estate valued at 3,479l. gross. His widow, Mrs. Anna Maria Elizabeth Bell. is the sole executrix.

MR. THOMAS SHAVE BOULTON, 27 Engayne Gardens, Upminster, late secretary of Burt, Boulton & Haywood, Ltd., manufacturing chemists, who died on March 28, left estate of the gross value of 6,3797. 16s. 1d., with net personalty 6,0817. 19s. 9d., and probate of his will has been granted to his widow, Mrs. Mary Elizabeth Boulton.

MR. EDWARD WILLIAM GRIMWADE, J.P., the Queen's MR. EDWARD WILLIAM GRIMWADE, J.P., the Queen's Hotel, Upper Norwood, Surrey, of Grimwade, Ridley & Co., who died on March 15, left property to the value of 33,763l. 4s. 4d., with net personalty 17,864l. 2s. 1d. The testator gave 400l. to his wife, 100l. each to his son and daughters-in-law, and the residue of the property during the life of his wife to pay 100l. a year to his daughter, Mrs. Paull, and the remainder of the income to Mrs. Grimwade. On her death 6,000l. is to be left in trust for his daughter, Mrs. Paull, and the ultimate residue to his two sons.

Marriages.

Jack—Hoban.—At the Parish Church, Cambuslang, on June 16, William Seamans Jack, chemist and druggist, Galston, to Ruth Lilian. elder daughter of the late Mr. Stanley Hoban, 4 Ardoch Gardens, Cambuslang.

WHITE—WADE.—At Addingham Wesleyan Church, on June 16, Arthur Norman White, pharmacist, only son of Mr. W. White, Grove House, Thornbury (managing director of William White & Son, chemists, Sunbridge Road, Bradford), to Lucy, youngest daughter of Mr. C. Wade, Ivy House, Addingham.

Deaths.

Böttinger.—The death is reported in Berlin, at the age of seventy-two, of Herr Henry Th. von Böttinger, president of the board of directors of the Bayer Co., Elberfeld. Herr von Böttinger was born at Burton-on-Trent of German parentage. He entered upon a commercial career first in London, and later went to a Munich bank. In 1882 he became a manager of the Bayer works at Elberfeld, and between 1883 and 1889 he undertook several business journeys to India, China, Japan, and the United States. Herr von Böttinger did not confine his interests to industrial work, but took an active part in the domain of science, notably chemistry and physics. In order to give foreigners an opportunity of learning German he created in 1908 the German Institute for Foreigners at Göttingen, which was transferred to Berlin in 1911. He also took a prominent part in political and national affairs.

BOWKER.—At Whitefield, Manchester, on June 11, Mr. James Skinner Bowker, chemist and druggist, aged forty-five.

CARNOT.—The death is announced from Paris of M. Adolphe Carnot, member of the Académie des Sciences, and a distinguished analytical chemist, aged eighty-two. M. Carnot, who was the younger brother of the late M. Sadi Carnot, a former President of the French Republic, was the author of a text-book on analysis.

Gibson.—At 122 King's Road, Brighton, on June 21, Ellen, widow of Mr. William Humphrey Gibson, F.C.S., chemist and druggist.

HEWETT.—At 40 Queen's Park Terrace, Brighton, on June 11, Mr. William Herbert Hewett, chemist and druggist, aged sixty-six. Mr. Hewett served his apprenticeship at Aldershot, and qualified in 1874. He was in business for twenty-seven years at West Cowes, where he held an appointment to the late Queen Victoria. Thirteen years ago he acquired the pharmacy of Foster & Else, 52 King's Road, Brighton, the style being subsequently changed to Hewett & Sons. In 1911 the business of Jarvis & Co., 36 St. George's Road, was taken over as a branch. Mr. Hewett had been a member of the Brighton town council since 1913. He was for nine years a member of Queen Victoria's private choir, which consisted of eight members. Most chemists who have been to Brighton will remember the imposing window-displays that Mr. Hewett used to make. He was a keen chessplayer, and was a member of the Hampshire and Sussex county teams. The funeral took place on June 16, when representatives of all the public bodies of the town attended to pay the last tribute.

HYATT.—The death is announced at Newark, New Jersey, of Mr. John Wesley Hyatt, the inventor of celluloid, at the age of eighty-two. Mr. Hyatt took out 250 patents in all, many of which had an important bearing on chemical manufactures. In 1914 Mr. Hyatt was awarded the Perkin medal of the New York section of the Society of Chemical Industry.

McKie.—At Blackburn, on June 17, the daughter of Mr. Robert McKie, chemist and druggist, Preston New Road

SUTTON.—At Marston Lodge, Croydon Road, London, S.E. 20, on June 11, Mr. Thomas Henry Sutton, formerly in business as a manufacturing chemist in Bermondsey, aged seventy-four.

WATT .- In London, on June 12, Mr. George Alexander Glenny Watt, South African representative of Evans Sons Lescher & Webb, Ltd., Liverpool and London, aged thirty-nine. Mr. Watt began his career with Mr. Murdock, chemist, Falkirk, and then came to London, when he entered the firm of his uncle (Lorimer & Co.). he went through the warehouse and acted as traveller. In 1906 he was engaged as traveller by Evans Sons Lescher & Webb, Ltd., with whom he remained until his death, He at first travelled in London; then, in 1911, he went to India for the company, and the following year to South Africa. He returned home for a holiday only last month. He was fond of music, and held the degree of A.R.C.M. He was exceedingly loyal to the house he represented, always making their interests his own. His services were highly appreciated by the directors, and he was a great favourite with the staff. He was buried at Kearnsey, near Dover, where he had property, on June 17, Mr. E. A. Webb, deputy-chairman of Evans Sons Lescher & Webb, Ltd., being present to represent the company. A memorial service was held at the church of St, Bartholomew-the-Great, Smithfield, E.C., on the same day, and was attended by the London directors and upwards of a hundred mcmbers of the staff.

Personalities.

It is announced that Sir Jesse Boot has decided to present a tract of land to the borough of Nottingham.

Mr. Percy J. Ashfield, chemist and druggist, Rhyl, has been re-elected President of the Rhyl Advertising Association.

MR. C. N. Jones informs us that he has left the Milton Manufacturing Co., Ltd., 125 Bunhill Row, London, E.C. 1.

Mr. George W. Crawford, chemist and druggist, managing director, Medical Hall, Ltd., Singapore, who has undergone a serious operation in a London nursing home, is now making satisfactory progress.

MR. ALBERT A. MICHELSON, professor of physics in the University of Chicago since 1892, has been awarded the Albert Medal of the Royal Society of Arts for inventions which have ensured minute precision in optical measurements. Mr. Michelson gained the Nobel prize for physics in 1907.

MR. SAMUEL W. FAIRCHILD (Fairchild Bros. & Foster) was the chairman of the Committee which organised the complimentary dinner given to Sir Auckland Geddes by the Pilgrims of the United States at the Ritz-Carlton Hotel, New York, on May 25. Mr. Chauncey M. Depew is President of the Pilgrims.

ALDERMAN A. SIDNEY CAMPKIN, J.P., member of the Council of the Pharmaceutical Society of Great Britain, has been re-elected chairman of the Cambridge Borough Assessment Committee—a position that he has filled for upwards of thirty years. Mr. Campkin had expressed a desire not to be re-elected, but the Committee's decision was unanimous.

Two of the family of Mr. W. J. Uglow Woolcock, M.P., we are pleased to learn, are showing an hereditary aptitude for study. Mr. Woolcock's elder son, James William Woolcock, who has held a foundation scholarship at St. Paul's School for three years, has been awarded a senior scholarship, and Mr. Woolcock's younger son, John Uglow Woolcock, has been awarded a foundation scholarship.

A SUM OF MONEY has been presented by William Metcalfe, Ltd., manufacturing chemists, Church, Accrington, to each member of the local fire brigade in recognition of their services at a recent fire at the company's works (C. & D., May 15, p. 46).

Rexall and Boots.

THE history and progress of the operations of the United Drug Co. in this country have been indicated from time to time in the C. C D., and as an enormous amount of interest has been aroused by the rumour that the company is to acquire Boots Pure Drug Co., Ltd., we may recall that in 1912 we gave considerable space to its doings when Mr. Liggett was busy laying the foundations of his campaign in the Provinces. "Truth" also dealt with the matter in February 1912 to the extent of two pages, quoting freely from The Chemist and Druggist regarding the operations of the company in Canada and the United States, and the visit of Mr. (now Sir) R. A. Robinson, ex-President of the Pharmaceutical Society of Great Britain, and four other gentlemen to the Convention at Boston in September 1911. In our issue of September 22, 1911 (p. 43), we gave some interesting details of the company's operations in Canada and the United States by an English pharmaceutical chemist who attended this Convention, when over a thousand members of Rexall were present. When Mr. Liggett paid his first visit to this country on a prospecting tour, he told an interviewer "that if any American company expects to succeed in England and develop its business it had better start in playing the piccolo rather than a brass band." Meanwhile the American drug trade Press have Meanwhile the American drug-trade Press have been trying to get at the truth of the rumours of the from the New York "Oil, Paint and Drug Reporter," Mr. J. N. Staples, junior replied: "Answering your inquiry, we have no statement to make at the present time concerning Boots, Ltd." According to various reports, a private business session of the Executive Committee of the United Drug Co. has been held to consider the proposition, but the conclusions arrived at have not been announced. There are, we understand, about 1,200 "Rexall" pharmacies in the United Kingdom, but whether these are all to be bought up by the new company which is to be formed we do not know. Below we give some further particulars of the subsidiary companies of Boots, Ltd., to which brief reference was made last

Society of Homoropathic Chemists, Ltd. Registered May 1894 with a capital of 2,000l. in 1l. shares, of which 126 were issued to December 31, 1919, at which date Sir Jesse Boot held ninety-nine, J. C. Boot eleven, and P. Sparkes eleven; five others, one each.

20th Century Photographic Co., Ltd. Registered October 1901 with a capital of 2,000l. in 1l. shares. Up to May 5, 1919, twenty shares were issued, when the shareholders were Boots Pure Drug Co., Ltd., thirteen; Sir Jesse Boot, one; and six others, one each.

and six others, one each.

and six others, one each.

Regcsan, Ltd. Registered January 1912 with a capital of 5,000l. in 1l. shares, all issued. At August 12, 1919, Boots Pure Drug Co., Ltd., held 4,994 shares; Sir Jesse Boot, one share; and J. C. Boot, one share; four others, one each.

East Midland Chemical Co., Ltd., Registered October 1916 as Boots, British Chemicals, Ltd., and renamed February 1920. Capital, 100l. in 1l. shares. Shareholders on December 31, 1919, when five shares had been issued, were Sir Jesse Boot (1), T. Ratcliffe (1), and Boots Pure Drug Co., Ltd. (3). Co., Ltd. (3).

Boots Art Publishers, Ltd. Registered November 1916 with a capital of 100l. in 1l. shares. Up to December 31, 1919, five shares were issued, the holders of which are Sir Jesse Boot (1), T. Ratcliffe (1), and Boots Pure Drug Co.,

Boots British Fine Chemicals, Ltd. Registered February 1920 with a capital of 125,0007, in 1t. shares; 5,000 preference and sixty-five ordinary shares were allotted on May 14, 1920, as follows: Preference—Boots C.C. (Eastern), Ltd., 1,000: Boots C.C. (Western), Ltd., 1,000: Boots C.C. (Southern), Ltd., 1,000: Boots C.C. (Northern), Ltd., 1,000; Boots C.C. (Northern), Ltd., 1,000; Boots C.C. (Lancashire), Ltd., 1,000. Ordinary—Sir Jesse Boot, five: J. C. Boot, five; J. E. Greenwood, five; W. J. Rowis five Bowis, five.

Information Department.

INFORMATION WANTED.

Postal or telephone information with respect to makers or firsthand suppliers of the undermentioned articles will be appreciated. E/186. E/186. Theosolvose. E/186. Nervalina capsules Lan/186. Dunnoline Lan/186. Scheffman's asthma cure (Paris) Noir Cosmetique Tryptamine solution) Be/176. WF/216. Nitro-Tudor Brand saltpetre Anzpah jock strap (suspensory bandage) Pyraloxin M/226. BB/216. Sana santal capsules BB/216. "Riodine" TK/216. "Grilo" brand zino Ma/226. E/186. Quodrolina oxide

INFORMATION SUPPLIED.

Babbitt's Lye, E/96
"Bell Tongue Syrup," B/36
Bengue's Analgesic Balsam,
K/lb and M/205
Benzoinaquol, W/205
"Bromo" paper, M/234
Bromo quinine, M/234
All Proposition of Pr Brown's Bronchial Troches, B/126 B/126 Cleavers' bay rhum, L/274 Cockle's pills, SG/113 Coley's fluid, B/195 Combs, W/174 Corkscrews (for perfumery bottles), C/106
Corn planes, T/96
Cosmetique in round sticks, perfumery S/233 s/255
Coty's perfumes, C/295
Lesohiens' syrup, G/46
"Dominion" floor polish, B/46
Dorin preparations, H/36
"Ectodyne," M/195
"Eosine," S/205
Eurobin, S/36
"Eybrowlin," B/86
Gage's Anti-hillions Gage's Anti-bilious M/116 Elixir, Grimault's Syrup, 0/275 Grinding machinery, C/163 Guard's hair dye, K/36 Gummaseur, K/56
Guttapercha tooth-stopping in sticks, C/74
Hematine crystals, B/75
Hinksman's asthma reliever, Indian podophyllin root, B/215
"Inecto" hair dye, L/56
James' (Lieut.) horse blister,
B/265 D/265B/265
Janet Moore's toilet preparations, N,96
Japanese farina, L/124
"Jay Nay" photo printingframes, P/95
Kelsey's seasickness plasters,
F/274
Keryl E/283 Kerol, F/283 "Kimoc, B/85
"Kolynos," G/264
Lactogen, B/46
Listerine, M/234 Little's oriental balm, 8/203 Looock's wafers, 8/53 Martin's apiol and steel pills, K/36 Martin's dog powders, L/315 Martin's dog powders, L/SIS Meggeson's vocalzone prepara-tions, S/144 Mellin's food, M/224 "Nadeo" dves, E/195 Nawrus, N/185 "Nell Gwynne;" perfumery, W/174 w)174
Nicotine for horticultural purposes, H/106
"Orlene" for deafness, S/164
"Oscol" argentum, LB/53
"Ovaltine," S/255
Ovartanie, fort halm, BS/274 "Ovattine," S/255 Overton's foot balm, BS/274 Paper cups, S/135 Panes Dianensin, M/15 "Parolax," E/65 "Resinol," S/74 Resistall, W/106 Revlue, H/56

Rice flour, N/64
Ronuk, L/195
"Rosine" perfumery, R/144
Rowland's Macassar oil, H/35
"Royal Court" bair dye, C/36
"Ruby" dog medicines, H/264
Salt cake, W/204
"Sansaflora" spray, L/84
"Sanobolic" ointment, E/145
"Sazodin," R/93
"Secca" cachets, N/134
Sedobrol, H/223
"Selsus" ointment and soap, E/96 E/96 Seltzogene tops, repairers Seltzogene tops, repairers, 8/145
Seniers' hat-cleaner, B/315
Sequah's instant relief, D/53
Sequanine, 8/284
Serchol, D/46
Silicate cotton, M/145
Silver leaf, C/284
Singleton's eye ointment, F/293
"Skin Success" preparations, F/53 E/53 Sloan's liniment, B/85
Smedley's chillie paste, E/85
Soda ash, C/145
Soda lime, H/214
Sodium bisulphite, M/75
Sophol, B/313
Sound-box for deafness, M/145
"Sozodont," B/113
Spasmodin. A/255
Sponees, M/23
Squibh's preparations, A/53
"Staminol," H/45
Steedman's powders, F/313
Steel manieure instruments, Sloan's liniment, B/85 manicure instruments, Steel W/174 W/174
Steiner's insect powder, B/263
Stomalix, SG/93
Stvmol, O/295
"Surco" elastic hosiery, M/46
Sypgar, B/195
Tammalite, O/295
Theocin, sod. acetate, C/255
Theyanoline, M/234
Thyratoxine (Byla), M/294 Thyratoxine (Bvla), M/294
Thyrnxine tablets, R/144, C/174,
Tincture presses, P/313
Tinker's dog mixture, K/125
Tooth picks, T/96
"Tonrniquet" brand white
drill uniforms, B/93
Towle's pills, H/35
Trench's remedies, B/53
Trivalin ampoules, S/234
"Trumilk." A/16
Tucker's asthma cure, W/255 Thyratoxine (Byla). "Trumilk." A/16
Tucker's asthma cure, W/955
Turned wood hoxes, W/75
"Tvphoo Tips" tea, J/63
Valda pastilles W/955 and M/26
"Valesco." K/105
Vandv's prenarations, M/275
Vandvk brown, H/45
"Vanoric" plaster, B/924
"Val Fin" hot-water bottles,
MR/174 MR/174 MR/174
Venice turnentine, N/125
Waterbury's cod-liver oil, S/26,
"Willoware" I./26, R/26
Wilson's chlorodyne, R/36
Wilson's Corega, R/116
Winslow's soothing syrup.
SG/93
Zenbyr rubbar bandsga, H/215 Zephyr rubber bandages, H/317

[&]quot;EPSOM'S HALTS" is the title of an article in "The Evening Standard "of June 22.

Observations and Reflections. By Xrayser IL

Dr. McWalter's

manly and outspoken protest against the manty and outspoken protest against the Dangerous Drugs Bill will, I trust, embolden others to speak out, though few of us probably will go to quite such lengths as he, and I suggest that both as pharmacists whose craft is in danger and as citizens of the country that has ever been foremost in the cause of human freedom, we should through our Parliamentary representatives bring such pressure to bear on the Government as will compel it to modify the objectionable clauses of this measure. The folly of trying to make clauses of this measure. The folly of trying to make people moral by Act of Parliament has been demonstrated often enough, but it has not been sufficiently insisted upon that if this were possible it would not be worth while. The greatest of the Puritans refused to praise "a fugitive and cloistered virtue"; it is at best a pale, anæmic thing, the exact opposite of what was regarded as virtue in the heroic ages of the world, and which the restrictions that secure it make impossible, for only in the soil of liberty can true virtue grow. Nor is it extravagant to say that our national greatness itself is endangered by the growing tendency to suppress our natural instincts by regulations forbidding their indulgence. We are in danger of becoming an emasculate people, and such a people has never yet originated anything great. I alluded just now to the Puritans, but the Puritans were at the beginning a positive rather than a negative force, though theirs was a narrow conception of human virtue. It was only when their passionate endeavour after liberty of conscience had spent its force that the prohibitions upon which their morality rested got the better of them. Milton foresaw the danger and warned them of it: we now see it "writ large" in the American people. Is it too late to avoid it ourselves?

The Foregoing Note

does not mean that there should be no restrictions on vice. Positive vice, indeed, must be kept down by all possible means, except such as inevitably force it underground to fester in secret. It is a commonplace of hygienics that even drains and sewers must be ventilated if they are not to become the greatest of dangers to the public health, and this is equally true in the sphere of morals. This, however, is another question, and one with which we are sufficiently familiar. We see the effect of undue or misdirected prohibition in the immense increase in the use of methylated spirit—to which petrol must, it seems, now be added—as a beverage. There can be little doubt that the alleged increase of the opium habit has the same cause. A natural craving becomes a depraved one by being persistently thwarted. Here we have another of those "vicious circles" into which poor human nature is so easily led, and the more easily, the more complex our civilisation becomes. We, as chemists, have, of course, to obey the law in these matters, however irrational they may at times appear to us, but it is none the less our duty to utilise the experience we gain by immediate contact with these evils to point out the danger of rash and unintelligent legislation with respect to them. The Minister in charge of the Bill has expressed indebtedness to the Pharmaceutical Society for its action in the matter, and Mr. Woolcock has well vindicated our right to consideration. This is satisfactory as far as it goes, but the larger question of forbidding the traffic in things useful in themselves because they are liable to abuse remains.

The Revival

of your special numbers is exciting lively interest. These numbers began in a very modest way in 1886, the year in which the C. & D. first appeared as a weekly publication. The first of them appeared in July of that year and contained only ten extra pages of literary matter. It had, however, several insets (circulars and price-lists of wholesale houses) and a special illustrated article on historic London pharmacies, and it was circulated among all the principal drug-buyers of the British

Empire. Next year and in 1888 there were two special half-yearly issues of varying size, but not until 1889 were the terms Winter and Summer Number used. From that time the series continued uninterruptedly until the winter of 1916-17. The Summer Number of 1889 consisted of fifty-six pages of literary matter and contained many specially written and finely illustrated articles of permanent interest, but it was only a promise of what we were to receive of the same kind in later years. The corresponding number of 1914 may be taken as a type of the rest. It ran to ninety-eight pages, and its illustrations, consisting of portraits of distinguished pharmacists, Chester pharmacists, famous French and other foreign pharmacies, meetings of the B.P.C., and miscellaneous subjects, were among the best things of their kind that have ever been produced. Even the war, as we have seen, did not for some time stop the issue of these special numbers, the last of which until this present summer appeared in January 1917 and was in every respect worthy of its forerunners. The C. & D. may well be proud of such persistence in high-class journalism under such crippling conditions.

War Posters

suggest to a writer in "The Times" the subject of advertising in general, much of which is (he says) or advertising in general, much of which is (he says) wasteful, even when immediately effective. He complains especially of English advertisers for saying "the same dull thing over and over again," and for practising "mass tactics" instead of aiming at getting attention "with as few posters as possible." He seems to have ignored the fact that, the British public being itself somewhat dull, its that the second of the se its attention has not only to be got but to be retained, aud that to this end the persistent repetition even of a dull thing may be more successful than an occasional brilliancy. There is, however, much force in what he says in favour of appealing to the æsthetic sense, the sense of beauty, which lurks, often unsuspected, even by those who possess it, in the dullest people. Everybody (as he says) "likes order better than confusion, simplicity more than aimless complexity, strength and purity more than muddle of colour," but he exaggerates greatly the lack of these in modern English advertising. "The old dull realism" may still survive, but it is not nearly so common as he would have us think. Many of the advertisements in the C. & D., for instance, are in their kind real works of art, "things of beauty," and our public advertising stations are not so frequently disfigured as they used to be by bad designs and ugly workmanship. This is very largely due to the late Mr. Barratt (of "Pears") who may very appropriately be referred to here, since your first "Summer Number" contained an article by him on this very subject, illustrated by reproductions of some of his firm's most successful posters. He was the chief pioneer of artistic advertisement in this country.

The Centenary

of the discovery of quinine falls in the present year, this alkalo'd having been first isolated by Pelletier in 1820, nearly 200 years after the first recorded case of the treatment of a European (the corregidor of Loca, Don Juan Lopez de Canizares) for fever by cinchona bark. Several other supposed "essential salts of quinquina" had been obtained from the bark before then (one, now known as kinic acid, as early as 1746), among the researchers being Fourquoy, Vauquelin, and Berthollet, but they all missed the mark more or less narrowly. Gomez, a Portuguese pharmacist, obtained what he called cinchonine in 1811, and this, after further examination by Houton-Labillard'ère, was shown by Caventou and Pelletier to consist of two distinct alkaloids, which they named respectively quinine and cinchonine. They were enabled to arrive at this separation by the discovery of organic alkalis by Serturner. The chief merit is rightly ascribed to the actual discoverers, but it is well to remember the debt we owe to those who through long years prepared the way for them.

Drucgists' Sundriesmen are having great difficulty in procuring spray bellows, according to a correspondent of "The India-Rubber Journal."

"SANITAS" DISINFECTANTS

FLUIDS, POWDERS, SOAPS & FUMIGATORS Should be stocked by all Chemists.

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Chemists'

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ART OF DISPENSING. (oth Ed.) 8/-, by post 8/6. VETERINARY COUNTER PRACTICE. 6/-, by post 6/6. CHEMIST'S DICTIONARY OF MEDICAL TERMS. 3/6, by post 3/10

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Buy from the Actual Manufacturers,

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(L. M. Lambert, Managing Director.) Established in London, 1880.

Colne Works, Uxbridge, Middx.

PATENTS AND TRADE MARKS.

There are many worrying difficulties to be overcome in connection with the Registration of Trade Marks and the grant of Letters Patent which members of the Retail and Wholesale Drng Trade can avoid by consulting an efficient agent, who would undertake all the trouble for an inclusive fee and obtain protection in the United Kingdom and abroad. Advice in the first instance free. Pamphlets gratis.

56 Ludgate Hill, London, E.C. 4.

REGINALD W. BARKER.



Editorial Articles.

This Number

of The Chemist and Druggist is a record one. It is the largest issue of the paper which has ever been sent by newspaper post. That is another way of saying that it is the biggest thing of its kind that has been seen in the drug-trade of this or any other country. We are naturally proud to be associated with the production of such a number and to have this unmistakable evidence of the support of the drug-trade. Never in the history

of the paper have we had more subscribers, more advertisers, or more expert contributors, and it is these three that combine to make possible such a number as the present. Our accountant has worked out some statistics which help us to realise the material side of the production He finds that it requires between ten and eleven tons of paper for this issue, sufficient to cover a space of about thirty-five acres. If the numbers were placed on the top of each other they would form a pile two and a-half times the height of St. Paul's Cathedral, the land mark in the view from our office window. If the copies were placed end to end the line would extend for over two miles, so that a carpet, for a queen to walk upon. could be laid from our office to Westminster. But it is for higher uses still that THE CHEMIST AND DRUGGIST is destined-the instruction and delectation of the keenest chemists in the land. Where there is enthusiasm in the drug-trade, there will be found THE CHEMIST AND DRUGcist, of which fact we constantly receive fresh evidence. The man who "doesn't read it" doesn't live in a live world. For the design on the cover our Publisher has selected the mortar as an emblem of the trade we represent. It is in a sense a companion design to the beautiful group of pharmacy pots which formed the motif of the Summer Number of 1915. One might dilate long upon the happenings of the intervening years, but it is better perhaps at the moment to regard the resumption of the C. & D. Special Numbers as a sign of the survival in a regenerated world of the best features of Evolution must always be onward. for progressive thought is provided in this issue, and although it is more than an average meal, if the main facts are digested our labours will not have been in vain. Visitors to the British Pharmaceutical Conference next month are provided with a comprehensive guide to Liverpool pharmacy, and even those who cannot journey to the second city of the Empire can at least feast their imagination on Mr. Owen's lively description of the tour through the heart of Wales, which will form the feature of one day of the Conference. If they do not feel the call of the country the article will have failed in its purpose. As the cult of the pharmacy pot and the mortar owes its origin to the C. d. D., so does the interest in pharmaceutical book-plates. A contributor has unearthed a small collection, but he is clearly disappointed that examples of chemists' ex-libris are so scarce. That the science of chemistry originated in the preparation of medicines of which chemists and druggists are the present-day exponents is acknowledged except by those who would rob us of our title. This subject is the theme of an article in this issue. New facts about the part played by cinchona and quinine in the war are also given, and this number contains a full synopsis of the recently-issued Report on Medical and Allied Services, which is destined perhaps to create a revolution in the practice of pharmacy. The knotty problem of wages in the manufacturing, wholesale, and retail sides of the drug trade is re-stated in a manner which should make the article a starting-point for further discussion. The new Pharmacopæias of Norway and Finland, published during the stress of war and now available for calm study, are reviewed. There are several points which compilers of future pharmacopæias must take into account, but in the meantime pharmacy should benefit by the new ideas put forward. There are many other features of this issue upon which we should like to comment, but sufficient indication has been given of the necessity to linger longer than usual on the weekly bill of fare which we provide.

Excess Profits Duty Concessions.

THE storm which has raged about the head of the Chancellor of the Exchequer since the continuance of the excess profits duty at an increased rate was announced by him has at length done good, and the concessions made to the critics of the tax are embodied in a White Paper just published. The document here and there assumes a tone which suggests that the writer thought it necessary to apologise for the concessions granted—an attitude which most people will find difficult to understand. The relief proposed to be given to taxpayers is intended primarily for small businesses, for new businesses, and for businesses other than public limited companies which are managed or conducted by the actual proprietors. It is intended that the small trader's allowance, which was instituted by the Finance Act, 1917, shall in future be extended to any trade or business the pre-war standard of profits of which did not exceed 2,000%, and the profits of which for the accounting period do not exceed 4,000%. The amount to be allowed under this head is to be one-fifth of the sum by which the profits of the accounting period are less than 4,000%; and it is to be in addition to the statutory allowance of 2001. where the pre-war standard exceeds 2,000l., a modified allowance is to be granted, which is to be the small trader's allowance just referred to reduced by the amount by which the pre-war standard exceeds 2,000l. Where a business is wholly new or where there has been an increase in the capital employed in the business, a concession is made by increasing by 1 per cent. the percentage taken on the capital of the new business in arriving at what is to be taken as the pre-war standard of the business for the purpose of assessing the duty. This percentage is in future to be 10 per cent, in the case of companies and 12 per cent. in the case of private firms. And this additional 1 per cent, is to be allowed even in cases in which the Board of Referees have fixed a special percentage on the capital employed in a particular trade. Besides this enlargement of existing concessions, the Chancellor now introduces a wholly new one applicable to small businesses managed or conducted by the actual proprietors. This applies to any business carried on by an individual, or a firm, or by a private company, and the concession is only allowed to a working proprietor, who is defined as the individual carrying on the business during his full time, or any partner or any director similarly occupied and owning, in the case of a director, not less than 20 per cent, of the share capital or stock of the company. The substance of the allowance is that if the person, or firm, or private company, as the case may be, upon being assessed for the duty makes an application to that effect, the pre-war standard in calculating the duty is to be taken as the percentage standard of 10 per cent. or 12 per cent., as already explained, on the capital employed, and in addition a sum of 500%, in respect of each full-time working proprictor or director in the business. This ought to be distinct encouragement to small proprietors to engage in business, and it may perhaps have some effect as a clog on the tendency which every class of business has to be concentrated in the hands of a few large proprietors, so that the provision may serve a social as well as a fiscal end. The changes are in every case intended to take effect for any accounting period which ends after December 31, 1919. Meanwhile further consideration of the Finance Bill in the House of Commons is postponed owing to pressure of other business.

Pharmacy Reform in Austria.

THE Austrian Government has submitted a Pharmacy Bill to the pharmaceutical profession for its consideration, the principal purpose of which is to empower the State to assume possession of all public pharmacies in Austria. However, it is not the intention of the Austrian Government to nationalise pharmacy; an entirely novel course in this respect has been adopted, inasmuch as the pharmacies will be State property, but will not be exploited by the State, which proposes to lease the pharmacies to qualified pharmacists, who will conduct the business on ordinary lines. The Government does not propose to acquire proprietary rights over all the pharmacies immediately, on the contrary, the present owner is allowed full freedom to dispose of his business as heretofore. However, in the event of his wishing to sell his pharmacy, he is required to offer it in the first place to the Government, which will either accept or refuse the offer within a period of twelve The indemnity to be paid by the State on assuming possession of a pharmacy is based upon the average yearly return yielded by the business, calculated by taking the returns of the preceding seven years, excluding the year with the highest profit and the one with the lowest return. The average annual profit thus ascertained will be capitalised at the rate of 5 per cent.-i.e., twenty times this amount will be paid by the State to the owner for the right of taking over his business. In addition, the actual value of the stock, fittings, etc., will also be paid. Only the return resulting from the purely pharmaceutical side of the business will be taken into account, and any side-lines, such as the manufacture of specialities, mineral-waters, etc., will be disregarded. The Government alone will have the right to open new pharmacies, on proposals emanating from communities, pharmacists, doctors, or from sick clubs. All pharmacies belonging to the State will be leased in open competition, the lease being granted for a period of not less than five or more than ten years. At the expiration of the lease the latter may be renewed without holding a fresh competition. The lessor is required to take over the stock and fittings of the Lessors are entitled to compete for the vacant lease of another pharmacy, and in the case of several competitors for the same pharmacy preference is to be given to the pharmacist who has held for the longest period the lease of a State pharmacy, and among those who have not yet had possession of a business the senior in point of pharmaceutical service since obtaining his qualification will have the preference. of pharmacies may be required to purchase their supplies of certain specified drugs from certain appointed establishments (this points to the possible creation of State distributing centres or central laboratories). The lease of a pharmacy may be granted to an existing, or to a newly-created, institution of public interest. It will be interesting to learn on what basis the value of the leases of the State pharmacies will be calculated, and the income from this source must, in the first place, afford a sinking fund for the repayment of the outlay incurred by the State in acquiring possession, on the above plan, of the existing pharmacies. question of the nationalisation, or communalisation, of pharmacies is under discussion at present in practically every European country possessing the system of limited pharmacies, and Austria is the first to introduce a Bill dealing with this subject.

Electrically Sterilised Milk.

A RECENTLY issued report of the Medical Research Committee deals with the question of the destruction of bacteria, in milk by electricity. An electrical method for sterilising milk was devised in 1913 by Professor J. Martin Beattie and Mr. F. C. Lewis, F.C.S., of the Liverpool University, and this process was repeated and extended by Professor Leith at Birmingham. Birmingham workers found a close parallelism between the effects of heat and of the electrical current respectively upon the organisms in the milk, and they concluded that the electrical method owes its results not to the direct action of the current as such upon the bacilli, but to the heat generated in its passage; to them both methods alike were thermal methods of destruction. They were led to believe that in the electrical method the current raises the temperature of the milk more quickly, and since it passes through every part of the milk, the heat which it generates reaches every part of the milk at the same moment. It has this advantage over the simpler thermal method. Further, though the heat is generated always at the same rate, it increases with the length of the milk column traversed by the electrical current, and hence, as in the thermal method, the temperature of the milk will continue to increase until it reaches its highest point as it issues from the tube. The heat conditions of the two methods are, therefore, very similar. Their sterilising power is also similar, though the electrical is quicker in its action, and Professor Leith summarised his report by saying that "both the thermal and electrical methods have a high practical value, and deserve consideration in any endeavour made to improve milk supplies. The thermal is simpler and cheaper, the electrical quicker in action." Professor Leith suggested further that both methods could be made more efficient by grafting on them the practice of pasteurising by two treatment applications, with rapid cooling of the milk after each, and that even with a single application the milk would store better if rapidly cooled after treatment. In the opinion of the Medical Research Committee the experiments at Birmingham, though they entirely support the practical results obtained by Professor Beattie and Mr. Lewis at Liverpool, were not complete enough on their bacteriological side to settle finally the question whether the electrical current in this method has a direct bactericidal action or whether it acts purely as a thermal agent. Sir Oliver Lodge was strongly of opinion that its action was purely thermal. The apparatus devised for the process consists of a "lethal" tube electrified by an alternating current, through which the milk passes at a given rate. The efficiency of the method was judged bacteriologically and by the fact that no obvious chemical change had been produced in the milk. It was concluded that milk can be freed from B. coli and B. tuberculosis by the electrical method, without raising the temperature higher than 63° or 64° C. This temperature effect is very short in duration, and in itself is not the principal factor in the destruction of the bacteria. Though the milk is not sterilised in the strict sense of the word, yet the percentage reduction of bacteria taken over a period of a fortnight was 99.93. The keeping power is considerably increased, and so far as can be ascertained the properties of the milk are not in any way impaired. The test on babies has not been made on a large scale, but in the few cases in which electrically sterilised milk was employed the children thrived exceedingly well.

LIVERPOOL REVISITED







1896.

BRITISH PHARMACEUTICAL CONFERENCE

1920

Now that the delegates and visitors to the British Pbarmaceutical Conference, which is to assemble in Liverpool for a mid-July session, are beginning to feel the fascination of "Mersey City," a survey of the scene they will shortly view will incite the expectation to enthusiasm. The fascination of this western gateway of Empire may first affect the philologists, leading them to spend time and energy in discussing whether "Liver" originated as the name of a legendary bird, depicted in

the city arms, or was a corruption of "Lither," perpetuated in "Lither, adjacent to Bootle), or whether "Liverpool" has been derived from a Cymric word, "Lerpwl," indicating a confluence. A majority, however, of the guests at the conference will best be attracted towards a week of profit and pleasure by the notes of an agent in advance who has been daily in touch with the Mersey estuary for a third of, a century, and, therefore, can present both the historical landmarks and the evidences of progress since the preceding conference, held at Liverpool in 1896. The fascination exercised by the growth, development, and refinement is delightfully stimulating.

On entering the Town Hall, where the Lord Mayor is to give a reception to meet the members and friends of the British Pharmaceutical Confer-

ence," a recently painted lunette-fresco will be seen on the left-hand wall of the vestibule. This fresco represents the gift, by King John, to Liverpool of its first charter, which bore the date 1207—a mere strip of parchment still preserved and reproduced of late in facsimile. The 700th anniversary of the bestowal of this initial charter was celebrated by a "pageant," when half the country "pajjed" more dignifiedly than it has just "jazzed." Among the episodes depicted in the Liverpool Pageant, incongruously accompanied by the shricks of passing L. & N. W. locomotives and with a background of coalgas tanks, were the presentation of the charter and the

surrender (1644) of Liverpool Castle (1230-1725) to Prince Rupert. Rupert marched from his camp at Everton, viā a woodland path, on the line of the present Oldhall Street, in which have sprung up, during the last two decades, the David Lewis Northern Hospital, the St. Paul's Eye Hospital and the Cotton Exchange. Further artistic portrayal of the evolution of Liver-

Further artistic portrayal of the evolution of Liverpool, from a fishing village to a shipbuilding centre, an ocean-liner port, and a hive of art, science, and com-

merce, will be borne graphically to the mind of anyone who devotes a few minutes to the Rathbone panels sculptured in semi-relief on the eastern, or Lime Street, façade of St. George's Hall. Liverpool, as seen to-day, is a nineteenth-century city. The year 1830 saw the opening of the Liverpool and Manchester Railway, and Manchester Railway, now merged in the L. & N. W., while the "hungry forties" brought about 100,000 starving Irish people, for whose shelter, with a hot haste by no means paraileled in current housing schemes, "back-to-back" houses were run up to the despair of sanitarians. After the demolition of many of these con-demned habitations 2,900 tenements, sheltering 11,900 people, have been erected during the last forty years, at the cost to the municipality of 1,250,000*l*., the net yearly financial loss being about 3,500l., the present yield of a rate of the pound.



Photo.]

LIVERPOOL TOWN HALL.

[Cleworth. prese

twopence in the pound. The sanitary and moral gains, however, have far exceeded the expenditure.

Liverpool and its environs to-day extend for twelve miles along the eastern, or Lancashire, side of the Mersey, the municipal area alone containing almost 800,000 persons, a cosmopolitan community, while in "Mersey City"—which embraces the four county boroughs of Liverpool, Bootle, Birkenhead, and Wallasey, together with the urban districts of Litherland, Waterloo-with-Seaforth, and Great Crosby on the Lancashire side of the river, and Bebington (Port Sunlight) on the Cheshire side—the aggregate population is 1,200,000. In 1880 Liverpool was constituted a city by Royal Charter, and the Anglican

bishopric dates from the same year. A Roman Catholic bishopric, now an archbishopric, existed some years earlier. The municipal and other areas just grouped return sixteen representatives to the House of Commons (Liverpool itself has eleven). Liverpool and Birkenhead each own independent water supplies about sixty miles distant in Wales. Liverpool, Birkenhead, and Wallasey have alike their own municipal electric tramways. Liverpool, which supplies Bootle with both tramway service and water supply, has 600 tramcars on the streets this year, and has essayed a not very encouraging experiment with 100 motor omnibuses. On the principle of the four men who by marching ten times across a theatre stage represented the Forty Thieves, 6,000 tramcars are counted as entering and leaving the central area of Liverpool daily. About a year before the British Pharmaceutical Conference of 1896, Liverpool inaugurated a series of municipal extensions which, being continued until 1913, have led to a proportionate increase of the City Council from 64 members to 150. The remodelled Council Chamber cost

200,000l. The municipal area now embraces thirty-three

square miles.

Among the important buildings erected since 1896, are the Mersey Docks and Har-bour Board's offices (350,000l.), the Cunard Steamship Co.'s offices (300,000l.), and the Royal Liver Insurance offices (650,000l.), all three in line and facing the landing-stage. Near by, at the foot of James Street, stand the White Star Steamship Co.'s imposing offices with a prominent and useful corner clock, and at the foot of Water Street the new Tower Buildings. The latter cover the site of the former slave market and the place of incarceration of Napoleonic war prisoners and debtors. Colonial Buildings (Elder, Dempster & Co.), the Bank of West Africa, and the Bank of Liverpool and Martins adorn either side of Water Street, the residue of which is earmarked for reconstruc-The Central Post (cost, 400,000l.) in tion. Office

Victoria Street (1899), the tramway offices and fire station in Hatton Garden, the David Lewis Hostel and Theatre, the Bevington (Rowton) Hostel, the Bevington Bush model dwellings, the Walton and Wavertree baths, the Nether-field Road washhouses, and the Queen's Drive (6½ miles long and 80ft. to 108 ft. wide) are some of the sights which deputations from as far off as New Zealand have

journeyed to examine.

The Mersey Docks and Harbour Board (a public trust), whose dock estate forms a frontage on both sides of the Mersey, has a yearly revenue of $2\frac{1}{2}$ millions sterling, among its assets being the landing-stage, the tobacco warehouse, and the Gladstone dock (the dock cost 41 millions sterling) at Seaforth, each unique in extent. In seeing the sights of "Mersey City," few would omit the electric tramway system (dating from 1898), the Overhead (Dockside) Electric Railway, the Mersey Tunnel Electric Railway. way, the Lancashire and Yorkshire Electric (1904) lines way, the Lancashire and Yorkshire Electric (1904) lines to and from Southport, Aintree, and Ormskirk, and the Mersey ferry services to and from Birkenhead, Rock Ferry, New Ferry, Seacombe, Egremont, and New Brighton. The two Wallasey ferry-boats, now named the Royal Iris and the Royal Daffodil, which figured so gallantly at Zeebrugge, are again on the daily service.

Nothing fascinates the inland visitor to Liverpool so uch as "the magic of the Mersey," the spell of which will soon be woven around the Conference members as they pass through the saloons and corridors of a Cunard leviathan or form part of the marine panorama as voya-geurs on a White Star tender. Then will come another especial delight for the ladies on the boulevards of Southport, the "Garden City by the Sea," or rather by the Marine Lake, with the sea in the varying distance. Pharmacists will recall that Southport, very few years ago, had as Mayor Mr. Henry Ball, Ph.C., who, besides being a leading chemist, did pioneer work in x-ray research. Formby (Freshfield Station), where golf is to be played on twin courses, is two-thirds of the way from Liverpool to Southport, which lie twenty miles apart on the Lancashire and Yorkshire electric line.

Little remains aboveground to reward the archæologist, but the Lancashire and Cheshire Historic Society has affixed, during the past score years, tablets to denote the site (now covered by the Queen Victoria Memorial) of

the chapel of Liverpool Castle and the birthplaces of William Ewart Gladstone, Viscount Cardwell (of Army short-service fame), Clough (poet) and his sister (pioneer of university women). All these four celebrities were born in Rodney Street, the "Harley Street" of Liverpool. Near the west end of Rodney Street (i.e., in Upper Duke Street) is the birthplace of Felicia Dorothea Hemans. Rodney Street leads on to the Cathedral, in course of building since 1904. The building since 1904. The Lady Chapel (completed) is open for daily choral services, and much of the works of the main building can be inspected.

In 1896 the visitors to the British Pharmaceutical Conference found chief central interest in St. George's Hall (cost 350,000l.), where the Assizes and Chancery Courts are held, and two halls devoted to concerts and exhibitions; the Town Hall (the interior of which has been considerably enriched since); the

[Cleworth. the William Brown Free Library and Museum (both extended); recently Walker Art Gallery (which latterly has received many additions of important pictures), and University College. Adjacent to the William Brown Library has been erected the Central Technical School and Nautical College, while as a wing of the library itself the Hornby Reading Room, with its valuable collection of engravings, affords a new treasure-house. The city can boast of fifteen branch libraries, six being Carnegie gifts, of which the outer districts as far as Southport contain other examples. In the Commercial Reference Free Library, reached from the Exchange Flags on the north-western side of the Town

in smaller cities. In addition to Sefton (with famous palm-house and aviary), Stanley, Wavertree, Newsham, and Sheil Parks (all extensive), Liverpool has acquired by gift the Wavertree Recreation Ground (which affords frontages to the new Blue Coat Hospital and the School for Blind Children) and Bowring Park, and by purchase Calderstones Park (which contains a replica of the Shakespeare birthplace garden at Stratford-on-Avon) and Harthill (an adjacent estate devoted in part to a market garden for disabled heroes). In all, the Liverpool parks and gardens cover

Hall, is a new and pioneer institution which is being copied



Photo.] EXCHANGE HOTEL. Headquarters of the Conference.

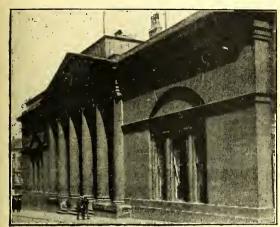


Photo.]

THE LYCEUM CLUB, of which visitors will be made honorary members during Conference Week.

1,112 acres, and comprise thirty gymnasia for children and thirty-two bowling-greens for adults. The Botanic Gardens, which are to he removed to Calderstones, contain a grouping of medicinal plants, upon which lectures to pharmaceutical students are given in situ.

Educational Facilities.

THE UNIVERSITY.

The "University College" of 1896 has been developed into the University of Liverpool (chartered in 1903), the expansion of which has been by leaps and hounds, while a current and generously launched appeal for a million sterling forecasts provision for the record of enrolled and waiting students. Among recent additions to the huildings are: The William Gossage Chemical Laboratories, the Thompson-Yates Pathological and Physiological Laboratories, the Hartley Botanical Lahoratories (of which Professor Harvey Gibson is the head), the Zoological Laboratories, the Electrical Laboratories, the Muspratt Chemical Laboratories, the New Arts Theatre, the School of Architecture and Town Planning, and the School of Veterinary Medicine (of which Profesor Share-Jones, a well-known North Wales resident, is the head). The School of Tropical Medicine is associated with the

University, and its administration is carried on in a building just completed in Pemhroke Place. The University endowments include

the Heath-Harrison Chair of Organic Chemistry and the Campbell Brown Chair of Chemistry. The Royal Infirmary, which is connected with the University adminis-

tration block, has been equipped with a most modern dispensary (of which Mr. Prosper H. Marsden,

which Mr. Prosper II. Maisuen, F.C.S., Ph.C., lecturer in materia medica and pharmacy at the University, has charge), while nearly opposite is the new Dental Hospital Maisure and Maisure

pital, where University diplomas in dentistry are awarded. The City Analytical and Bacteriological Laboratories and the School of

Hygiene form a new hlock near the Medical Institution at the top of Mount Pleasant, where also the vacant site has been prepared for the Hartley Materiatry.

the Hartley Maternity Hospital.

At Fazakerley (three miles from Liverpool Town Hall) the munici-

pality has erected a splendid hospital (the finest of a series) for infectious diseases and a sanatorium for consumptives. In Myrtle Street a new children's infirmary, with a dispensary hard by, has heen combined with a children's convalescent home in Cheshire.

THE SCHOOL OF PHARMACY.

The School of Pharmacy took shape in 1849, as an offshoot of Jacob Bell's idea to form a Liverpool hranch of the Pharmaceutical Society, and through which, as we show later on (see p. 171), the Liverpool Chemists' Association was evolved, and founded lectures, classes, library, lahoratory, and museum at the Royal Institution, Colquitt Street, still the headquarters of the Association, and the resort of students for books and specimens. In 1885 Mr. F. dents for hooks and specimens. In 1885 Mr. E. Davies, F.C.S. (father of Mr. Herhert E. Davies, M.A., B.Sc., F.I.C.), resigned his Chemistry Lectureship. The Council of the C.A. then arranged for a continuance of a revised curriculum, with Mr. J. S. Ward, F.C.S., who had opened the Liverpool School of Pharmacy in 1882, and thus a purely private school was demacy in 1002, and thus a purely private school was developed into an officially recognised institution. After Mr. Ward's demise (1892) the school was conducted for sixteen years hy Mr. R. C. Cowley, who in 1908 accepted the Principalship of the College of Pharmacy, Brisbane. Mr. H. Humphreys Jones, A.I.C., Ph.C., F.C.S., was his successor in Colquitt Street, where the classes were transferred to rooms midway between the Royal Institution and the Apothecaries' Hall (now devoted to a different class of husiness). Last year the great post-war accession of students precipitated a long-contemplated removal of the school to No. 2 Blackburne Place, in proximity to the Cathedral. Here the accommodation exceeds that of any kindred school in the provinces. The laboratories, lihrary, lecture and class rooms are lofty, spacious, well lighted and ventilated, and there is a side garden, a very desirable adjunct in a city. Modern equipment is provided for "Minor," "Major," and part-time classes. The parttime courses attract students from St. Helens, Widnes, Wigan, Southport, Chester, and other easy-distance centres, the arrangement, as the C. & D. has stated, heing excellent for those who wish to prepare themselves thoroughly and gradually, say, from their nineteenth year. The school is in a direct line with the University of Liverpool, the City Lahoratories, the Dental Hospital, and a series of medical institutions. Mr. Humphreys Jones is assisted by Mr. P. H. Jones, F.I.C.; Miss Rimmer, Miss Ridgeway, Mr. Boggiano, Mr. Rawson, Mr. Butler, and Miss Dilvs Jones.



Photo.]

STUDENTS OF THE LIVERPOOL SCHOOL OF PHARMACY.

Lueworth.



L. & N. W. RAILWAY HOTEL, LIME STREET.

Liverpool Wholesale Houses.

Comparatively speaking, nowhere will great developments since 1896 be more obvious than among the wholesale druggists' laboratories and warehouses, which range along the southern side of Hanover Street and penetrate half a dozen streets running off Hanover Street on both sides. "Drugland" covers an ever-widening area in the very heart of Liverpool. In each of the central and suburban thoroughfares retail pharmacies will be found prominent in position, and among the most up-to-date in the country. A tendency to cut off or to reduce the number of branches is noticeable among the private owners. The Lyceum (near the Bold Street corner of Hanover Street), to which Conference visitors are to be admitted, counts wholesale and retail representatives of the trade among its leading members. Bold Street or its Renshaw Street connection is on the direct route to the Philharmonic Hall, the Hahnemann Hospital, the City School of Art (all in Hope Street), and the School of Pharmacy, No. 2 Blackburne Place, Hope Street Corner.

EVANS SONS LESCHER & WEBB, LTD.

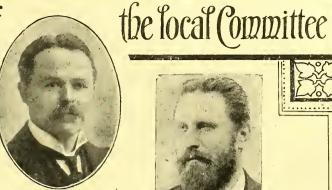
Just a hundred years ago, according to accepted records, the world-wide business of Evans Sons Lescher & Webb, Ltd., was founded by Mr. John Evans (born in 1787), who traded in Worcester, where his brother Edward afterwards established the well-known vinegar industry of Hill, Evans & Co. In or about 1820, Mr. John Evans went to London, and entered into partnership with Kempson, Yates & Co., but soon left them in order to join a Mr. Daniel Stable in starting a wholesale drug-gists' business, under the style and title of Stable, Evans On the retirement of Mr. Stable in 1828, Mr. Evans took Mr. Joseph Sidney Lescher into partnership, and the business was carried on (first under the name of John Evans & Co., and afterwards as Evans & Lescher) in Wood Street, Cheapside. Quite early in the firm's history, Messrs, Eyans & Lescher determined to develop a Welsh and Scottish connection; and with that idea Mr. Evans went to Liverpool in 1833 and established a branch, taking with him his second son, Mr. John Hilditch Evans. At the end of that year the third son, Mr. Edward Evans, who had been apprenticed to his father in 1830 and had since gone to a pharmacy in Poplar for retail experience, was called to join his brother at Liverpool. Shortly afterwards Mr. J. S. Lescher retired from partnership in the Liverpool concern, and Mr. Evans's three sons (the eldest being Mr. Thomas Bickerton Evans) joined the firm, then and for many years afterwards known as Evans Sons & Beginning in Fenwick Street, the business increased rapidly, so that the firm had to remove to larger premises in Lord Street, and eventually to the spacious premises of the Bank of England in Hanover Street, with laboratories and mills in Fleet Street, still in the company's possession.

When Mr. John Evans went to Liverpool, he little foresaw the developments that were to take place both in the extent and the character of the trade. The goods handled in those days consisted chiefly of drugs and chemicals, and nothing was further from the intention of the wholesale druggists than to manufacture galenical preparations for their retail customers. These, however, were taken in hand in 1848, and were gradually followed by the addition of sundries, proprietary articles, and all the modern adjuncts which go to make up a retail chemist's stock. Mr. Evans died in 1865, and his eldest son in the following year. The second son had returned to the London house some years previously, leaving Mr. Edward Evans at the head of affairs. Almost from the first, indeed, the chief share of the management had fallen to his lot, and it was due to his remarkable business acumen that the foundations of the great house were so well and truly laid. Mr. Edward Evans's career was more fully outlined in The Chemist and Druggist, I., 1905, p. 46; it must suffice to record here that it was under his inspiration that the firm established a branch in Montreal in 1866, in conjunction with Mr. Mercer—a business now amalgamated with The National Drug and Chemical Co. of Canada, Ltd., of which Mr. Alfred Bickerton Evans, the fourth son of Mr. Edward Evans, is a director in addition to holding a directorship in the English company. Owing to the business capacity inherited by his sons, Mr. Edward Evans retired from an active share in the management of affairs at the comparatively early age of fiftyfive; but he remained identified with the policy of the firm up to the time of its amalgamation with the London house in 1902, when the combined interests were converted into a limited company; and he ultimately passed away, the acknowledged "father" of the drug-trade, in 1905. The two sons of Mr. T. B. Evans had both died some years previously, and the conduct of the business had devolved on Mr. Edward Evans and four of his sons, Messrs. John James, Edward, William Paterson, and Alfred Bickerton Evans. Mr. Henry Sugden Evans, the youngest brother of Mr. Edward Evans, was trained in the Liverpool house, but was transferred to London, and eventually to Montreal. The family had also been closely identified with the interests of retail pharmacy, Mr. Edward Evans, sen., having twice been President of the Liverpool Chemists' Association, and having served for some years on the Council of the Pharmaceutical Society of Great Britain. The story of the manifold activities of his sons brings our record to the present day.



Photo.] [Cleworth.

Some members of



H. HUMPHREYS JONES, A.I.C.





F. C. COOLING

J. M. TALLANTYRE



CHARLES SYMES, PH.D.



J. H. HIRST.



G. H. BURROUGHS.



A. W. ASHCROFT.



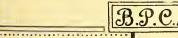


T. FELL ABRAHAM.



WILLIAM WELLINGS.





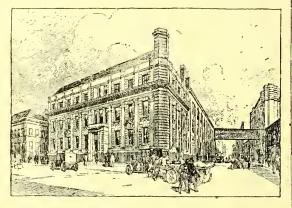
B.P.C.Liverpool, 1920





THE LIVERPOOL DIRECTORS OF EVANS SONS LESCHER & WEBB, LTD.

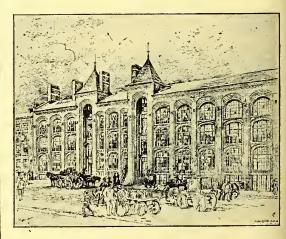
The eldest, Mr. John James Evans, J.P., was apprenticed to the trade in 1858, and for a time studied at Bloomsbury Square, and subsequently, being recalled to Liverpool, under Dr. Sheridan Muspratt. He was admitted a partner in 1863, at the age of twenty-one, and at once took an important part in the management, conducting the buying and creating the firm's export business. It was through his financial genius that the striking success attended the flotation of the company in 1902, the shares being subscribed for five times over. He became chairman, and continued to direct the company's activities till his retirement in 1916. It was a period of continued expansion, notably in the erection in Seel Street, in 1913,



56 HANOVER STREET AND SEEL STREET.

of a handsome building designed by Sir Aston Webb (now President of the Royal Academy), and the bridging of the street so as to connect the new premises with existing departments (C. & D., I., 1913, p. 774). By this addition a floor-space of over 25,000 square feet was added. Mr. Evans was President of the Drug Club (in 1901), an alderman of the Cheshire County Council, chairman of its finance committee, and a member of the Mersey Docks and Harbour Board. He was appointed a Justice of the Peace for the county of Cheshire in 1890, and was for upwards of fifty years an elder of the Presbyterian Church. It was during his chairmanship that the outbreak of the great war took place; and an inset in a recent issue of the company's price list is eloquent testimony to the response made by the company's management and staff to the call for men. About 300 joined the Forces, and some of these, as the record shows, made the supreme sacrifice. Mr. J. J. Evans died in 1917, within a year after his retirement, aged seventy-five.

Sir Edward Evans, J.P., who was the second son of Mr. Edward Evans, sen., began his commercial career in a merchant's office in Liverpool in 1862. Four years later, his services were required by his father's firm, and after nine months at 56 Hanover Street he began to act as one of their representatives, taking ground which he continued to cover for twenty-one years. He was admitted a partner in 1868, and from that time to the incorporation of the company paid several business visits to Canada and the United States. He was knighted in 1906, became President of the Drug Club in the following year, and in



LABORATORIES: WOOD STREET FRONTAGE.

1912 was President of the British Pharmaceutical Conference. In 1909 he was presented with his portrait by the Liberals of Liverpool, the presentation being made by Mr. H. H. Asquith, then Prime Minister. Sir Edward succeeded his brother as chairman on the retirement of the latter at the end of 1916, and three months later the company absorbed the business of Clay, Dod & Co., St. Anne Street. Sir Edward died in the autumn of 1917 at the age of seventy-one.

Mr. William Paterson Evans, J.P., the present chairman of the company, is the third son of Mr. Edward Evans, sen. He was born in 1858, and entered the business in 1874. Always active, both in commerce and in public affairs, Mr. Evans became especially prominent during the European war. He accepted the presidency of the Liverpool Chemists' Association in 1916, and retained it during three troublous years; he also sent his three sons to serve in the Army, and one, Captain E. H. Sandford Evans,

Some members of



D. H. EVANS.

the local Committee





HAROLD WYATT.



EDWIN THOMPSON, J.P.





W. J. WILLIAMS, A.C.I.S.





PROSPER H. MARSDEN, F.C.S.



JAMES McINROY.



MARTIN S. HUGHES.



A. J. FERRIDAY.

J. G. WALLBRIDGE, F.S.M.C.

B.P.C.Liverpool, 1920



Lancashire - Fusiliers, was killed in action on July 22, 1916. Like his late brothers, Mr. William P. Evans has been President (in 1911) of the Drug Club. During this spring, in addition to sustaining the duties of chairman of the local committee of the British Pharmaceutical Conference, he has visited Canada and the United States ..

The fourth generation has in recent years made its appearance on the board of directors. Mr. J. J. Evans's eldest son, Mr. B. E. Everett Evans, began his apprenticeship in September 1888, but owing to the state of his health retired at an early date and died in 1905. Mr. James Herbert Everett Evans, second son of Mr. J. J. Evans, was admitted a partner in 1900, and on the death of Mr. Michael Conroy undertook the responsible duties of director of the laboratories in Liverpool. His/brother, Mr. Kenneth Wollaston Everett Evans, third son of Mr. J. J. Evans, was, on the formation of the company, appointed a director, and now has a large share in the buying and selling on the Liverpool markets. Mr. Edward Nevett Evans, the elder son of Sir Edward Evans, was admitted a partner in 1898, but subsequently retired. Mr. John Nevett Evans, the younger son of Sir Edward Evans, began his apprenticeship in 1896. He became a director on the formation of the company, and assists in the general management. In 1919, as our readers are aware, an issue of new shares took place with great success. The complete list of directors is as follows: William Paterson Evans, 56 Hanover Street, Liverpool, chairman; Edward Alfred Webb, 60 Bartholomew Close, London, deputy chairman; Alfred Bickerton Evans, 32 St. Gabriel Street, Montreal; James Herbert Everett Evans, 56 Hanover Street, Liverpool; Thomas Edward Lescher, 60 Bartholomew Close, London; Harold Edward Webb, 60 Bartholomew Close, London; Harold Edward Webl, 50 Hanover Street, Liverpool; Kenneth Wollaston Everett Evans, 56 Hanover Street, Liverpool; Stephen Foster Webl, 60 Bartholomew Close, London. The business addresses given in the company's price list comprise premises in Hanover Street, Fleet Street, Wood Street, and Seel Street, Liverpool; works, bacteriological laboratories, and a drug-farm at Runcorn; an office and show-room at 48 International Exchange, Church Street, Birmingham; and a branch at 92 William Street, New York. Under the style of Evans Sons Lescher & Webb (Colonial), Ltd., a subsidiary company has been formed to carry on the business in Australia and New Zealand; and there are agencies in Paris, the West Indies, Cuba, Mexico, and all the Central and South American Republics. The com-pany thus commands advantages that may fairly be described as unique in the history of the drug-trade. following table, adapted from an earlier one which appeared in The Chemist and Druggist, II., 1907, p. 929, sets forth the lineage of the company:

> KEMPSON & HERMON (Snow Hill) JOHN KEMPSON

KEMPSON, YATES, PARKINSON, BROWN & ROPER

KEMPSON, YATES, EVANS & PARKINSON

AYRTON, SAUNDERS & Co., LTD.

The foundation of Ayrton, Saunders & Co., Ltd., dates back to the year 1868, when the late Dr. F. Ayrton, deputy-coroner for Liverpool, induced the late Mr. A. H. Saunders, father of the present chairman of the company, to join him in forming a firm of wholesale druggists. Mr. Saunders had, some years previously, been a partner in a wholesale house in Walworth Road, London, S.E. His health having broken down, he was obliged to retire to the country, and chose Devonshire, his native county, where he spent five years of inactivity. His health was by this time re-established, and the offer of Dr. Ayrton was accepted. Within a few years, Dr. Ayrton, who had regarded the venture rather in the light of a hobby, sold his interest in the concern to Mr. Saunders.

The firm was first established in Cornwallis Street, but, outgrowing the premises, was removed to Duke Street and Parr Street. In 1889 Mr. A. H. Saunders died, and the business was continued by his two sons, Messrs. H. G. and W. H. Saunders. Progress was rapid, and in 1898 it became necessary to remove to still more extensive premises: land was acquired in Hanover Street, and the present handsome buildings were erected. In 1903 the firm acquired the businesses of H. Gilbertson & Sons, Ltd., London, and W. Kemp & Son, Horncastle, and was

converted into a limited company.

In 1909 Mr. H. G. Saunders died, after a long illness, and the control passed into the hands of Mr. W. H. Saunders, its present chairman, who was subsequently joined by Mr. H. Nixon, now deputy-chairman; Mr. W. Hole; Mr. James Duncan; Mr. Charles Huxtable, F.C.S., Ph.C.; and Mr. F. J. R. Bennett. Mr. W. Gilbert Saunders, F.I.C., F.C.S., Ph.C., the only son of Mr. Saunders, was admitted a director in 1911, and, as our readers will remember, accepted a commission in the Army on the outbreak of war, and in 1916 was killed in action at the age of twenty-seven. He had at that time reached the rank of captain and adjutant in the King's (Liverpool) Regiment; and a memorial tablet erected in the works in the following year fittingly commemorates his great sacrifice.

Just prior to the commencement of hostilities new premises had been acquired in Duke Street in order to cope with the expansion of trade. It became increasingly difficult to carry out the original plans, and it was not until the spring of 1917 that the building was ready for possession. The laboratories occupy the whole of the five floors of the building, and are equipped throughout with modern machinery and every requisite for the manufacture of pharmaceutical preparations on a large scale. Electricity is the motive-power used throughout the works, and the premises are steam-heated. There is ample

> JOHN STABLE (27 High Holborn) JOHN STABLE, JUNIOR (Lambeth Walk)

STABLE, EVANS & Co. (about 1820) (62 Wood Street, and later Cripplegate Buildings)

JOHN EVANS & CO.

EVANS & LESCHER (1828) (John Evans and J. Sidney Lescher)

EVANS, MERCER & Co. (1866) (Montreal)

H. SUODEN EVANS & Co. (1880) (Montreal)

EVANS SONS & MASON, LTD. (1884) (Montreal)

EVANS & SONS, LTD. (1887) (Montreal)

Amalgama ted with—
'THE NATIONAL DRUG & CHEMICAL
COMPANY OF CANADA, LTD. (1905)

EVANS LESCHER & EVANS (1845)

EVANS LESCHER & EVANS (1845)
(London)
(T. Hilditch Evans, a partner; the business was removed from Cripplegate to Bartholomew Close; 1863, John Evans retired; 1866, F. H. Lescher became a partner; 1870, T. H. Evans retired and H. Sugden Evans came in.)

EVANS LESCHER & WEBB (1879)
(E. Alfred Webb became a partner; Edward Evans took the place of his brother, H. S. Evans; later, John J. Evaus took his father's place.)

EVANS SONS LESCHER & WEBB, LTD. (1902)
Great-grandsons of John Evans came into the directorate, including Harold
E. Webb in London; also a grandson of J. S. Lescher—T. Edward Lescher.)

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Evans sons & Co. (1835 (Liverpool)



DIRECTORS OF AYRTON, SAUNDERS & CO., LTD.

ground attached which will be available as it is required for further building purposes, the whole of the site and premises (like the main building in Hanover Street) being the property of the company. In the meantime, the ever-increasing demand for willowettes and other cardboard boxes necessitated the provision of fresh accommodation in Duke Street, and in 1915 the box-making factory was transferred there. The space vacated in the main building then became available for the needs of the company's growing sundries and packed-goods service, and additional premises were subsequently acquired in Campbell Street, Manesty Lane, and Henry Street. Fresh shares were issued last year, and the company now employs a staff of nearly a thousand, under the personal management of the directors.

The chairman, Mr. W. H. Saunders, who is just completing a world-tour of an interesting and informative character, was born in London and began his career with a firm in St. Paul's Churchyard. In 1863 he joined his father and brother, going on the road in the capacity of a representative. During his twenty years in this position Mr. Saunders visited almost every town in Great Britain and Ireland. Mr. Saunders's hobby has been foreign travel, and he has visited nearly every country in Europe, as well as Canada and the United States. He has also filled several public positions in Liverpool, and is considerably helped in his social and philanthropic work by his wife.

Mr. Harold Nixon was educated at the Royal Institution and the Liverpool College Upper School. He joined Ayrton & Saunders in 1897. After considerable experience (first in the town despatch, and then in the correspondence department) he was elected a member of the board of directors in 1908, having charge of the sundries section. Mr. Nixon is a member of several local societies, including the Rotary Club.

Mr. Charles Huxtable, F.C.S., Ph.C., was educated at the Merchant Venturers' Technical College, Bristol, and served his apprenticeship with Mr. Plumley, chemist and druggist, of that city. He gained further experience in Torquay, Margate, and London, and finally on the Continent, where he spent three years. On passing the Qualifying examination, Mr. Huxtable, joined the staff of Hearon, Squire & Francis; and while with them he contributed jointly with Mr. W. A. H. Naylor, F.I.C., F.C.S., some scientific papers to the British Pharmaceutical Conference. After a period with W. G. Barrett & Co., Dublin, and Stafford 'Allen & Sons, Ltd., Long Melford, Mr. Huxtable joined Ayrton, Saunders & Co., Ltd., in 1911, and became a director twelve months later. He controls the manufacturing laboratories.

Mr. James Duncan was educated at the Science and Art School, Newcastle, and the Seafield Academy, and served his apprenticeship with Mr. F. Park, chemist and druggist, Newcastle. After considerable retail and wholesale experience, including the representation of

Ayrton, Saunders & Co., Ltd., in the North of England, Mr. Duncan was elected a director in 1910, taking up his present position as controller of the buying and selling side of the drug department.

Mr. W. Hole, who was previously managing director of H. Gilbertson & Sons, Ltd., joined Ayrton, Saunders & Co., Ltd., when Messrs Gilbertson's business was taken over by them. Mr. Hole is well known in South Wales and throughout the West of England, where he has travelled for over forty years, and where his personality has gained him a large circle of friends.

JOHN THOMPSON, LTD.

The founder of the wholesale druggists' business bearing the name of John Thompson, Ltd., 58 Hanover Street, has long since passed away. Mr. G. H. Burroughs, who has been chairman of the company for many years, passed the Qualifying examination in 1881, and subsequently



Photo] [Cleworth.

John Thompson, Ltd., 58 Hanover Street.

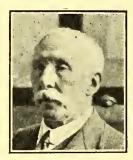
worked up a flourishing retail business in Borough Road, Birkenhead, prior to acquiring his interest in Messrs. Thompson. The company does an extensive trade, its drugs and proprietaries being in request over a large area, especially in the Northern Counties.

R. Sumner & Co., Ltd.

R. Sumner & Co., Ltd., wholesale druggists, date back to the year 1844, when the late Mr. Robert Sumner established the business. After carrying it on for about thirty years, Mr. Sumner was succeeded by his sons Edward and Robert, who afterwards took into partnership Mr. A. M. Hugill, Ph.C., second son of the late Mr. Hugill, of Meggeson & Co., London. Mr. A. M. Hugill was

apprenticed to Mr. Smeeton, Leeds, and gained the Major qualification in 1879. Upon the retirement of Messrs. Edward and Robert Sumner, Mr. J. Overton joined the firm. Mr. Overton was apprenticed to Ferris & Co., Bristol, and qualified in 1874. The business was converted into a limited liability company in 1900, Mr. A. M.





MR. A. M. HUGILL.

MR. JOHN OVERTON,

Hugill and Mr. J. Overton becoming (as they still remain) managing directors. In 1914 a removal was made to much larger premises in Hanover Street. Having the conveniences for a more extensive business, a very rapid increase has been made. In addition to their drug trade and a department devoted to ships' hygiene, the company have an extensive surgical-instrument business. The scientific side is encouraged, and Messrs. Sumner hold many important agencies, such as the sole agency for the British Empire of the Swiss Government Institute for serums, vaccines, etc.—an institute noted for its researches in modern therapeutics.

It is intended to bring in two new directors at an early date—Messrs. P. J. S. Overton and Gordon Morum. Mr. P. J. S. Overton, son of Mr. J. Overton, was apprentized



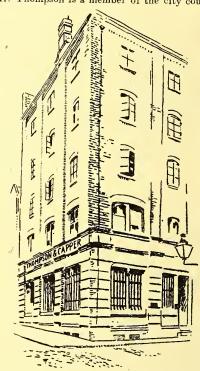
R. Sumner & Co.'s Premises.

with the late Mr. William Martindale, London, and took his "Major" in 1906. He served during the late war in the artillery, attaining the rank of major, and was in France for four years. Mr. Gordon Morum, who also joins the Board, is a nephew of Mr. A. M. Hugill. He served his apprenticeship with Mr. Hunt, Winchester, and qualified in 1914, afterwards gaining further experience with Raimes & Co., York. Mr. Morum also saw active service, joining the Honourable Artillery Company very early in the war.

THOMPSON & CAPPER, LTD.

The business of Thompson & Capper, Ltd.. dates back to 1798, in which year a homeopathic chemist's shop was opened by Mr. Thomas Thompson. Mr. Thompson carried on the business under his own name until joined by his son George, when the style was changed to Thomas Thompson & Son. In 1843 Mr. S. J. Capper joined the firm as a partner, and the style of Thompson & Capper was adopted. Later Mr. Isaac Cooke Thompson, son of Mr. George Thompson, and Mr. Henry Capper, son of Mr. S. J. Capper, were taken into partnership. Mr. I. C. Thompson died in 1903 and was succeeded by his son Mr. Edwin Thompson, who in 1911 became the sole proprietor, and in 1912 converted the business into a private company and

became governing director, which position he still holds. He is also managing director of Holt, Thompson & Co., Ltd. Mr. Thompson is a member of the city council, and



THOMPSON & CAPPER'S PREMISES AT MANESTY BUILDINGS.

has paid several visits to the United States in connection with Rexall conventions. In addition to the wholesale and manufacturing departments the company have retail branches in Liverpool, Manchester, Birkenhead, Southport, Sheffield, Huddersfield, Bradford, and Leeds. Their proprietaries, compressed tablets, and photographic departments are very widely known:



BRITISH HEADQUARTERS OF THE UNITED DRUG Co., BOSTON, U.S.A.

J. H. & S. Johnson.

The firm of J. H. & S. Johnson, manufacturing chemists, was established in 1802. On the death of Mr. Samuel Johnson in 1882, the business was taken over by Mr. Samuel Hearon Johnson and Mr. Samuel Wright Lee, the latter of whom had been with Messrs. Johnson since the year 1858. The premises in Whitechapel and Church Street were subsequently rebuilt, and the firm acquired additional accommodation at 2 and 3 Leigh Street.

Liverpool Chemists' Association.

"Let us now praise famous men." Although there are in Great Britain a few—a very few—older associations of pharmacists than the Liverpool Chemists' Association, there is none that boasts a more distinguished record. When it was founded, seventy-one years ago, the population of Liverpool and its suburbs was, in round figures, 360,000, and the number of pharmacies 200. According to the latest information the corresponding population is upwards of 760,000, and the number of pharmacies nearly 400. And with this increase in scope has come a corresponding increase in the achievements and the prestige of the Liverpool Chemists' Association.

sponding increase in the achievements and the prestige of the Liverpool Chemists' Association.

It was on June 4, 1849, that a meeting convened by Jacob Bell met at the Queen's Hotel, Liverpool, to discuss the formation of an association of chemists. The late Mr. Edward Evans, father of Mr. William P. Evans, the present chairman of Evans Sons Lescher and Webb, Ltd.,

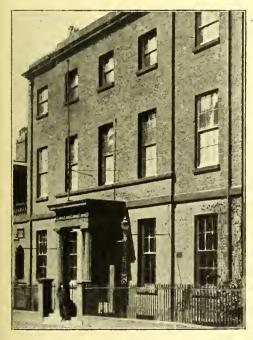


Photo.] ROTAL INSTITUTION. [Cleworth. Home of the Liverpool Chemists' Association.

was called to the chair; and, after an address from Mr. Jacob Bell, a committee "with power to add to their number" was appointed to take the necessary preliminary steps. The members of this committee were: Edward Tirker, George Thompson, William Jones, William Baskerville, Edward Tiernau, William Rodgerson, B. C. Rowland, T. A. Titherington, John Prescott, Horace Seymour Alpass, J. Balmer, Thomas Fell, William Procter, C. H. Shaw, George Bramwell, jun., T. Bickerton Evans, William Rawle, Edmund Jardine, John B. Edwards, H. Sugden Evans, and Edward Evans. (Mr. Alpass has been commemorated by his brother Freemasons in the Alpass Benevolent Fund.) So expeditious was the committee in its work that on June 22—less than three weeks later—the Association was formed by a resolution passed at a second meeting, at which the late Mr. H. Sugden Evans, a younger brother of the chairman of the first meeting, presided. Unlike some of the associations founded as the outcome of Jacob Bell's visits to the provinces, the Liverpool Chemists' Association decided that it would not be a branch of the Pharmaceutical Society, but would maintain an independent life. Mr. Robert Clay was elected President, Mr. Edward Evans Vice-President and treasurer, and Mr. J. B. Edwards secretary. It was decided that the council should con-

sist of the President, Vice-President, treasurer, and seven members—three to retire annually and to be eligible for re-election. The subscription for members was fixed at 10s. per annum, and that for associates at 5s. The speakers during the first session included Dr. Sheridan Muspratt (who discoursed on blowpipe reactions) and other men of scientific attainment.

Thus launched, the Association rapidly established itself as a force in pharmacy. It started a school of pharmacy -at which, it is of interest to record, Mr. (afterwards Sir) Dyce Duckworth was a prize-winner in 1859; it successfully opposed the efforts of the Liverpool Apothecaries' Company to obtain an Act of Parliament for incorporation. Among its first acts were the formation of a museum of "Materia Medica" at the Royal Institution, and a successful effort to induce the town council (now the city council) to group the medicinal plants at the Botanic Gardens, where lectures to students are given weekly, and specimens of plants supplied to the classes each season. And, as we notice frequently in looking through its early records, it gave prominence to subjects of scientific interest covering a wide range. In The CHEMIST AND DRUGGIST, 1861, p. 38, for instance, we read that a conversazione held at the Royal Institution "was quite a successful and brilliant affair. The rooms were crowded with a fashionable company of some 300 or 400 persons. . . Dr. Edwards . . . delivered some explanatory observations on spectrum analysis, polarised light, and magnetic and electric light, illustrated by interesting and instructive experiments. At a similar function ten years later Professor (afterwards Sir) Henry Roscoe lectured on solar chemistry, and—the Liverpool appetite for science being evidently of the keenest—he was followed by Mr. Edward Davies, F.C.S., with a lecture (with experiments) on explosive compounds. In 1865 Sir (then Mr.) William Crookes discoursed to the Association on the application of intense chemical action to the production of heat and light; and (to come to recent years) in 1901 Dr. Takamine gave an address on the digestive ferments and the active principle of the suprarenal gland. The Association spent another interesting evening in 1878 over phonographs constructed by Dr. Symes and Mr. C. H. Stearn. Faint reproductions of the human voice were obtained from one of these instruments, that of Dr. Symes, but the other was not tested in public. Dr. Symes, by the way, was elected a member of the Association in 1866—fifty-four years ago, and is still in harness. It will be remembered that his services to pharmacy were honoured, in the form of a complimentary dinner and a presentation, in 1913. A propos of old members, the Association had in 1885 sixty members, of whom the following survive: Dr. Charles Symes, Mr. T. Fell Abraham, Mr. A. Clay Abraham, Mr. John Bain (then of Robson Street, now of Lime Street), Mr. John Alexander (then of Bootle, now of Birkenhead), and Mr. William Parry (then of Scotland Road, now of Waterloo).

Trade matters were rigidly excluded from formal discussion at the meetings in the early years of the Association—partly because this was the custom among existing associations, and partly because membership of the Liverpool Association was not confined to members of the trade. In 1875, however, the position was felt to be unsatisfactory, and on March 9 of that year a meeting was called to consider the desirability of compiling a price-list and of looking into other trade questions. The circumstances of the formation of a separate body to deal with trade interests were explained in The Chemist and Druggist for December 1875 in the following paragraph:

In the early years of the existence of the Liverpool Chemists' Association . . . membership was expected to be confined to chemists and druggists, and associateship to the apprentices of members, and eligibility to a seat on the Council of Management was restricted to chemists and druggists. In process of time the laws were revised and new ones added, the result of which was that gentlemen were admitted as members who were in nowise connected with the trade, but who simply took an interest in chersical and botanical science and desired to take advantage of the library and the facilities afforded for information generally in these and kindred departments. Under these circumstances discussion on purely trade matters, such as early

closing, uniformity in prices, the Adulteration Act, poison regulations, advocacy of the exemption of all dispensing chemists from jury-service, etc., and the necessary expenditure of the funds of the Association in connection with these subjects, could not be satisfactorily carried out.... The retail and dispensing price-list is now published, and the Committee recommend that all chemists' shops be closed not later than nine o'clock (Saturdays excepted).

The officers and committee of the new society, known as "The Registered Chemists' Association of Liverpool, were: Mr. John Abraham, President; Mr. Alfred Red-ford, Vice-President; Mr. John Shaw, treasurer; Mr. ford, Vice-President; Mr. John Shaw, treasurer; Mr. Wharrie, hon. secretary; Messrs. J. Agnew, H. S. Alpass, B. Dickins, J. Edisbury, W. J. Foulkes, J. Fletcher, C. Symes, A. E. Tanner, J. Woodcock, H. Blackbourn, T. Davies, R. J. Elliot, J. Fingland, J. Hocken, R. Parkinson, J. A. Turner, and W. T. Warhurst. The first price-list was a book of thirty-two pages, and 300 copies of it were printed. It has grown bigger with successive editions, and its influence has been such that it is used widely throughout the British Empire for stock purposes. widely throughout the British Empire for stock purposes as well as a price-guide. It has now reached its sixteenth edition, comprising 112 pages, and the name of Dr. Symes still appears among the list of members of the revision still appears among the list of members of the revision committee. Happily, the dual arrangement worked well for a time. The two bodies dined together on January 18, 1876, the late Mr. J. J. Evans replying to the toast of "The town and trade of Liverpool"; and this friendly symbiosis (may we call it?) continued until 1908 when it was appeared that the societies had 1888, when it was announced that the societies had amalgamated.

The jubilee of the Association in 1899 was fittingly celebrated by a dinner at which the Lord Mayor of Liverpool, Professors Carter and Boyle, Dr. J. B. Nevins, and other leaders of public thought were present. Mr. Edward Evans, the President for the year, was unable to Edward Evans, the President for the year, was unable to be present—he was eighty-three years of age—but he was visited at his Wrexham residence, later in the year, by the council, and inspired his guests by his interest in the welfare of the Association. He had previously been President in 1855, and it is of interest to note that one of his sons, Mr. William P. Evans, was President in 1916-18—a span of sixty-three years. The complete list of Presidents is as follows:

of Presidents is as follows:

1849. Robert Clay.

1849. Robert Clay. 1850. Robert Clay. 1851. C. W. Shaw. 1852. R. Sumner. 1853. R. Sumner. 1854. William Rawle. 1855. Edward Evans. 1856. John Abraham. 1857. John Abraham. 1858. Henry Sugden Evans. 1859. Henry Sugden Evans. 1860. J. B. Edwards, Ph.D. 1861. J. B. Edwards, Ph.D. 1862. John Shaw. 1863. John Shaw. 1864. John Shaw. 1865. A. Redford. 1866. R. Sumner. 1857. R. Sumner. 1868. J. F. Robinson. 1869. John Abraham. 1870. John Abraham. 1871. John Abraham. 1872. Edward Davies, F.C.S.

1872. Edward Davies, F.C.S.
 { Edward Davies, F.C.S.
 1873. Charles Symes, Ph.D.
 1874. A. H. Mason, F.C.S.
 1875. A. H. Mason, F.C.S.
 1876. A. H. Mason, F.C.S.
 1877. Thomas Fell Abraham.
 1878. Thomas Fell Abraham.

Thomas Fell Abraham. 1878. 1879. Charles Symes, Ph.D. 1880. Charles Symes, Ph.D. 1881. Charles Symes, Ph.D. W. Conroy, F.C.S. 1882. Joseph Woodcock. 1883. Edward Davies, F.C.S. 1881.

1884. Edward Davies, F.C.S. 1885. Alfred Clay Abraham. 1886. Alfred Clay Abraham.

1887. Albert Henry Samuel. 1888. Albert Henry Samuel, F.C.S.

1889. Albert Henry Samuel, F.C.S.

R.U.S.
1890. Charles Symes, Ph.D.
1891. Charles Symes, Ph.D.
1892. J. S. Ward.
1893. J. Hocken.
1894. J. J. Smith.
1895. John Smith.
1896. M. Conroy, F.C.S.
1897. Alfred Clay Abraham.
1898. John Bain.

1898. John Bain. 1899. Edward Evans

1900. Anthony Smith Buck. 1901. Harold Wyatt, jun. 1902. Harold Wyatt, jun. 1903. Robert Charles Cowley.

1904. Robert Charles Cowley. 1905. Prosper Henry Mars-den, F.C.S.

1906. Prosper Henry Mars-den, F.C.S. 1907. Joshua Thomas Horn-

blower. 1908. Joshua Thomas Horn-

blower. 1909. Thos, Siminson Wokes. 1910. Thos. Siminson Wokes. 1911. Geo. Valentine Chap-

man Last. 1912. Geo. Valentine Chap-

man Last.

1913. Henry Humphreys
Jones, A.I.C., F.C.S. 1914. Henry enry Humphreys Jones, A.I.C., F.C.S.

Jones, A.I.C., F.C.S. Villiam Paterson 1915. Henry 1916. William Evans. 1917. William Paterson Evans.

1918. William Paterson Evans. 1919. David Harries Evans. 1920. David Harries Evans.

Some Liverpool Chemists and their Pharmacies.

Allan Brothers.

The business of Allan Brothers, chemists, 59 Breck Road, affords a striking example of heredity in pharmacy. The father of the family, Dr. J. H. Allan, Ph.C., was a Bell Scholar in 1878, and, after spending some years in business in Liverpool, took his medical degrees in 1906. Mr. John H. Allan, his eldest son, qualified as a chemist and druggist in 1907, and followed in his father's footsteps in the business, eventually obtaining his medical qualifications in 1919. The second son, Mr. Noel J. Allan, passed the Qualifying examination in 1908, and eight years later took the degrees of M.B. and Ch.B. with honours at Liverpool University. He subsequently attained the rank of captain in the Army, and died on active service (C. & D., 1918, p. 888). The third son, Mr. James S. Allan, qualified in 1911. Two of the daughters of Dr. J. H. Allan are also pharmacists.

CLAY & ABRAHAM, LTD.

The business of Clay & Abraham, Ltd., was established in 1845 at 87 Bold Street, where it still is. The original senior partner had previously been in trade for many years, and his business was a descendant of older ones. He never took any active part in its management, preferring to give his personal attention to a wholesale concern with which he was connected. It was accordingly conducted by the junior partner, the late Mr. John Abraham, who served more than once as President of the Liverpool Chemists' Association, and was successively an examiner and a member of Council of the Pharmaceutical Society of Great Britain. After his death it was carried on by Mr. Thomas Fell Abraham, Ph.C., and Mr. Alfred Clay Abraham, F.I.C., F.C.S., Ph.C., until its conversion into a limited company in 1911. The branch business in Castle Street was acquired in 1870.

W. H. CLUBB & Co.

138 Smithdown Mr. William Herbert Clubb, Ph.C., 138 Smithdown Road, Wavertree, who registered in 1885, had six pharmacies when the war broke out, but owing to the difficulties of securing assistants he disposed of three, which he of securing assistants he disposed of three, which he carried on in the Wavertree and Sefton Park districts. He has served for five years as Vice-President of the Liverpool Chemists' Association, having repeatedly declined the Presidency owing to pressure of business and the calls on his time as secretary of the Lancashire Federation. His brother, Dr. J. A. Clubb (Director of the Liverpool Municipal Museums), recently delivered a significant was the Liverpool Chemists' Association. scientific lecture before the Liverpool Chemists' Associa-tion, when his services to the School of Pharmacy were acknowledged by Mr. H. Humphreys Jones.

MR. D. H. EVANS.

Mr. David H. Evans, the re-elected President of the Liverpool Chemists' Association, was for three years (1916-19) the secretary, and in both offices has shown an assiduity and a resolution to protect the interests of retail pharmacists which has not only commended him to Liverpool members of the trade, but has attracted the co-operation and enrolment of pharmacists from surrounding districts, notably from Southport. Mr. Evans began his career in pharmacy by serving his apprenticeship to Mr. Ceredig Evans, J.P., Cardigan, and gained further experience in Nottingham and with Mr. R. A. Potts, South Audley Street, London, W. After studying at the late Dr. Muter's School of Pharmacy, he qualified in 1899. Mr. Evans has been vice-chairman (1915-18) and chairman (1918-20) of the Liverpool Pharmaceutical Committee, and a member of the local Interviewing Board under the Ministry of Pensions scheme for ex-service men. He is a

vice-chairman of the local committee of this year's British Pharmaceutical Conference. Mr. Evans carries on a suburban pharmacy at 148 Lodge Lane, Liverpool, one of the busiest of the thoroughfares connecting the residential Sefton Park area with the arterial Upper Parliament Street, the broad highway between the centre of the city and Wayertree.

R. & J. HERMAN.

Mr. Robert Charles Herman and Mr. John B. Herman, who are brothers, have their head pharmacy at No. 11 Warbreck Moor, Aintree, and conduct two branches in the central area, one in Water Street and the other in Parker Street. The elder brother registered in 1894, and the younger adopted pharmacy in 1903. The elder has been for many years one of the two representatives of retail pharmacy in the City Council, and he takes an active part in political organisation. The younger recently made a tour of the North American cities. Both are enthusiastic motorists.

Mr. John Jones.

Mr. John Jones, chemist and druggist, is the proprietor of W. & J. Ferguson, shipping chemists, 5 and 6 Strand Street, Liverpool. His business, which was established in 1824, was acquired solely by him in 1892. Born at Cradley Heath in 1854, and brought to Liverpool while a boy, Mr. Jones was educated at the Liverpool Institute, Mount Street. In June 1868 he entered the pharmacy of Messrs. Ferguson, and began steadily to work his way up. He was one of the promoters, and became President, of the Pharmaceutical Students' Society, which eventually the Liverpool Chemists' Association absorbed. Professor Harvey Gibson, Liverpool University, encouraged the students in their formation of a herbarium; and the Fairfield Camera Club gave scope for another instructive hobby. Mr. Jones passed the Qualifying examination in 1881, and is also a registered dentist. Medicine-chests for the ocean-going vessels from various countries are a leading line in the Strand, and with seamen as his chief customers he has been for many years an active supporter of such enterprises as the Pilots' Annual Concert and Ball, taking part in a repertory of light opera at the former and acting as M.C. at the latter. In his pharmacy there is a unique collection of specimens of tropical and marine zoology, largely contributed by sailor friends. Mr. Jones is a lifelong abstainer.

LAWRENCES, CASH CHEMISTS.

Lawrences, cash chemists, 44 Great Charlotte Street, possess a pharmacy in the heart of shopland and hotelland, "right up against the large stores," where they carry on an extensive dispensary and general business. Mr. A. Lawrence, the senior partner, has had thirty-five years' experience in Liverpool, and acquired the present business ten years ago. He recently admitted his nephew, Mr. R. Lawrence, to partnership.

Mr. Harold Lomax.

Mr. Harold Lomax, 43 and 45 Edge Lane, Liverpool, has a pharmacy in a healthful residential district bordering on the L. and N. W. Railway system and near the Botanic Gardens, where medicinal plants have been grouped for students ever since the early days of the Liverpool Chemists' Association. He registered in 1908, and is a protagonist in Liverpool of the "Rexall" combination. Mr. Lomax achieved considerable success during the war in training lady assistants, and can tell capital stories of their zeal and enthusiasm. In 1918 the business was converted into a limited company, with a branch at 133 Kirkdale Road.

JOHN McGuffie & Co.

The business of John McGuffie & Co., 10 Castle Street, was established in 1793, and is probably the oldest in the city. Castle Street has been described as "the embodiment of Liverpool's character and the centre of its system." The business remained, until a decade ago, in possession of the family of the original founder. The present proprietor of the old but modernised pharmacy is Mr. J. Milling, chemist and druggist (formerly of 48 Northgate Street, Chester), who purchased it in 1919.

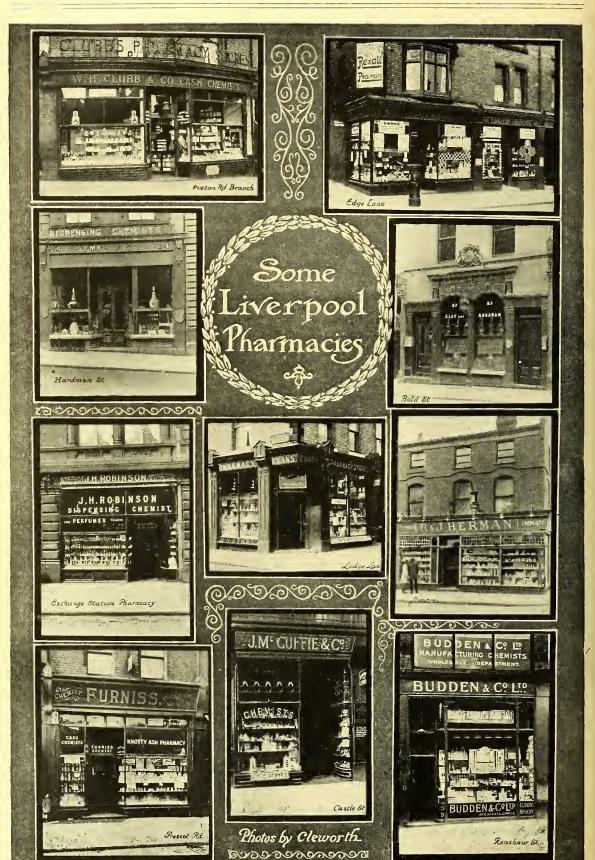
MR. L. MORETON PARRY, F.R.M.S.

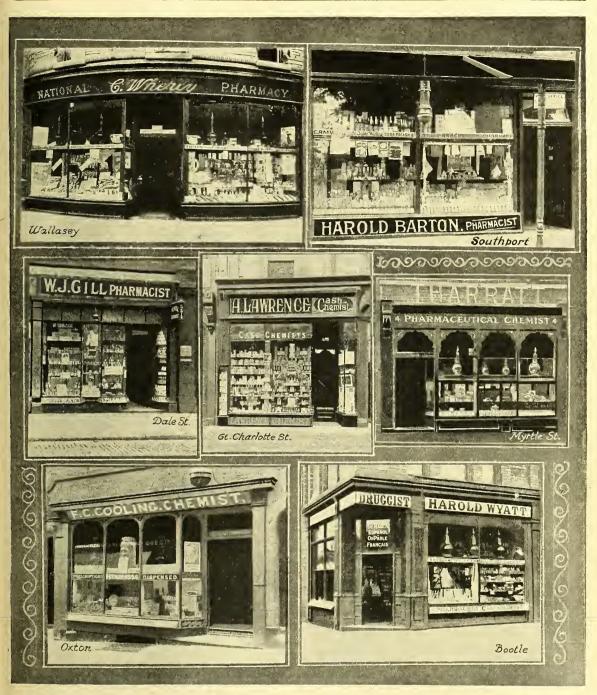
Mr. L. Moreton Parry, F.R.M.S., was born in the Isle of Anglesey and was educated in Liverpool. After experience in Dublin and in London, he qualified as a chemist and druggist in 1894, and subsequently studied bacteriology at King's College, London. Before commencing business on his own account in Oakfield Road, Liverpool, in 1902, Mr. Parry enlarged his experience with Beral, Paris; Dr. Symes, Liverpool; and Glaisyer & Kemp, Brighton. He became a Fellow of the Royal Microscopical Society in 1896. Active interest in the affairs of the Liverpool Chemists' Association and a term of office as its business secretary proved the prelude to his election to the Council of the Pharmaceutical Society in 1913; he was re-elected in 1916, and again—this time without a contest—in 1919. As chairman of the Society's War Auxiliary Benevolent Fund, Mr. Parry has greatly aided in raising the money by his eloquent advocacy, the total contributed being about 23,000%.

Mr. Henry Peet, J.P.
Mr. Henry Peet, M.A., F.S.A., J.P., chemist and druggist, Adelphi Pharmacy, has had a distinguished career, and, notwithstanding the responsibilities of his business, has devoted a large amount of time to public work. Mr. Peet served a five years' apprenticeship with Donington & Co., Spalding, and after passing the Qualifying examina-tion in 1877 was with Corbyn, Stacey & Co., New Bond Street, London, W., for a few months. He left this firm in order to take over the old-established business at the corner of Mount Pleasant, Liverpool, and a few years later acquired the business of the late Mr. John Flint, Ranelagh Place. The Corporation eventually required a portion of these latter premises for street improvements, and this led to the building of the Adelphi Pharmacy. It has one of the most prominent business positions in the city, being quite close to the Adelphi Hotel, and in consequence Mr. Peet has a cosmopolitan connection. The interior of the pharmacy is wedge-shaped, and every inch of space is utilised, both on ground-floor and basement. It is notable for its stock of American and Continental medicines and specialities, and the personal attention which the proprietor gives to business. Yet Mr. Peet is comparatively a man of leisure, fond of his home, fond of church and public work, and particularly fond of travel. Mr. Peet is well acquainted with both Continental and American pharmacy, having visited nearly every country in Europe; in addition to Canada and the United States. His keen interest in archæology may in a measure be responsible for his travels; he has been a Fellow of the Society of Antiquaries since 1893. He has a special link with Huguenot history, in that he is a descendant of Abraham de Vantier, a Huguenot who came to this country after the massacre of St. Bartholomew. Mr. Peet's public activities are practical as well as antiquarian. As a Churchman he did good service to the city by his strenuous advocacy of the parish churches being included in the City Churches Bill, and he was one of the witnesses before the House of Lords in regard to this matter, with the result that the proposal was incorporated in the Act. Mr. Peet has been a churchwarden for four years, and a member of the Liverpool Select Vestry for over twenty wears. He has edited numerous publications, including "Liverpool in the Reign of Queen Anne," Liverpool vestry books, and church registers. In 1894 he was appointed a Justice of the Peace, and has been a guardian of the poor and chairman of the local assessment committee. He has also been actively associated with the Liverpool Chemists' Association. In 1913 the honorary degree of Master of Arts was conferred upon him by the Liverpool University; and during the ceremony the Dean of the Faculty made the following reference to Mr. Peet's literary studies: "It is very fit and natural that the records of his own city should have attracted the attention of a Liverpool scholar. His patient and critical investigation, inspired and maintained by local patriotism, has at once illustrated some great periods in the life of this city, and added important materials for chapters in the larger history of the country."

Mr. John H. Robinson.

Mr. John H. Robinson, Exchange Station Pharmacy.
has been in business there for twenty years. Previously





he had done locum tenens work in every English county except Rutland. He has also visited South America. An energetic member of the Liverpool Chemists' Association, Mr. Robinson served as secretary for several years, but declined, owing to health and business considerations, nomination for the presidency. He is a man who has the courage of his convictions and has done much to bring about co-operation between wholesalers and retailers.

Dr. Charles Symes, F.L.S. Dr. Charles Symes, the "G.O.M." of Liverpool pharmacy, was born and educated in a remote part of Somersetshire, and maintains his connection with that delightful county through the Liverpool Somerset Society, of

which he is President. He was apprenticed in Gloucestershire to a man of literary rather than scientific ability, but this beginning to his career proved to be no draw-back. While still in his teens, Mr. Symes went to London, attended lectures by Professors Redwood and Bentley at Bloomsbury Square, and secured free admission to the Royal Botanic Gardens in a competitive examination. He passed the Minor examination when twenty years of age, and the Major (in 1860) at the age of twenty-one. After nearly three years' experience as an assistant at Leamington, where he formed the friendship of two doctors who were authorities on different branches of microscopy, Mr. Symes commenced husings in Pillenhand et the and of 1863. He fitted wh business in Birkenhead at the end of 1863. He fitted upa laboratory-at some domestic inconvenience-in which, it seems, he spent more time than in his pharmacy, and became scientific secretary to the Birkenhead Literary and Scientific Society. He also took the degree of Doctor of Philosophy at the University of Rostock, and was elected a member of the council of the Liverpool Chemists Association. All these activities proved no hindrance to the successful growth of his business, which, after Mr. Joseph Hallawell had been taken into partnership, was eventually converted into a limited liability company, with headquarters in Hardman Street (a business purchased from Mr. Delf in 1873), and a branch, known as Exchange Pharmacy, in Tithebarn Street. He has been President of the Liverpool Chemists' Association on three different occasions, and, as already indicated, a member of its council for nearly half a century. During the 'seventies Dr. Symes was invited to join the London board of examiners of the Pharmaceutical Society, but, preferring to offer himself for a seat on the Council, declined. He duly accomplished his desire in 1879, when he was second in a list of twenty candidates. Within a few months he carried a motion (with the aid of Mr. Hampson) for the admission of reporters other than the Society's own reporter. Another change advocated by Dr. Symes, the division of the Qualifying examination, was not realised till after his retirement, which was the occasion of an historic dinner in 1913 (C. d. D., I., 1913, p. 868). He was invited to deliver the inaugural address p: 868). He was invited to deliver the inaugural address at the sessional opening of the Society's school in 1881, and readers who possess The Chemist and Druggist for that year will find a characteristic portrait printed with the report of an address which clearly evidenced the scientific bent of the distinguished pharmacist's mind. From the first this trait was prominent—so much so that at the age of twenty-one he wrote a monograph on "The Preservation of Lemon Juice." quickly followed by others. From that day to the present the indexes of The Chemist and Druggist and other journals bear abundant witness to DRUGGIST and other journals bear abundant witness to his versatility in research. He is a Fellow of the Linnean Society, and a corresponding member (for many years) of the Philadelphia College of Pharmacy. Nor must it be forgotten that he was a member of the council of the Chemists' Trade Association during nearly all the time of its existence, and was also on the council of the Registered Chemists' Association of Liverpool until it coalesced with the Liverpool Chemists Association. The connection of Dr. Symes with the British



MR. PEET'S PHARMACY.

Pharmaceutical Conference is a long and honourable one. He was chairman of the local committee when the Conference met at Liverpool in 1896. He filled the office of President, in the two following years, at Glasgow and Belfast. At the present time he is senior Vice-President, and a vice-chairman of the local committee of the Conference. Eye trouble, we regret to learn, necessitates rest, and we understand that the Exchange Pharmacy is to be sold by way of curtailing the activities of the veteran worker.

MR. G. R. THARRATT, PH.C.

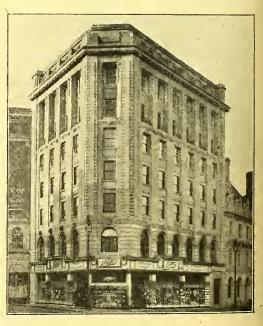
Mr. G. R. Tharratt, Ph.C., who has lately transferred his pharmacy from No. 17 to No. 4 Myrtle Street, has had his new establishment fitted up in a manner which has been highly commended by experts. Mr. Tharratt was born in Louth, and served his apprenticeship there with the late Mr. John W. Dennis, Eastgate. After a varied experience as an assistant he began business in Myrtle Street twenty-five years ago. Throughout his career Mr. Tharratt has taken an active interest in the Liverpool Chemists' Association, and for three years he held the position of secretary.

MR. W. J. WILLIAMS, A.C.I.S.

Mr. W. J. Williams, A.C.I.S., chemist and druggist, assistant local secretary of the British Pharmaceutical Conference, was, for several years, a representative of Clay, Dod & Co., wholesale druggists, Liverpool, in which capacity he became well known to many members of the drug-trade. He is now on the indoor staff of Evans Sons Lescher & Webb, Ltd., Liverpool. Mr. Williams has made a special study of accountancy; his double qualification is believed to be unique in the annals of pharmacy.

MR. HAROLD WYATT, Ph.C.

Mr. Harold Wyatt, Ph.C., 223 Stanley Road, Bootle, is the son of the late Mr. Harold Wyatt, chemist, of the same town. After studying at the Liverpool School of Pharmacy, under the late Mr. Ward, he passed the Minor examination in 1884 and the Major in 1887. He was President of the Liverpool Chemists' Association in 1901 and 1902, and joined the board of examiners to the Pharmaceutical Society of Great Britain in 1907. Mr. Wyatt has an international knowledge of pharmacy, and there are probably not many other pharmacists in this country who are perfectly at home in French and Spanish. His name is familiar throughout the English-speaking world through his monographs on dispensing-subjects.



BOOTS, LTD., CHURCH STREET BRANCH.



Through the Heart of Wales.

A descriptive guide to the motor tour on July 22, 1920, of the British Pharmaceutical Conference.

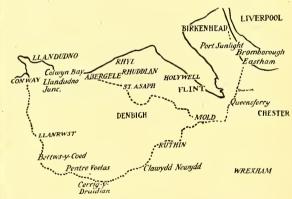


By R. CECIL OWEN.

WHEREIN lies the charm of Welsh scenery? Nine persons out of ten would answer with reason—in the hills and valleys with which she is so bountifully supplied. Yet this is but half the truth. For mountain scenery implies so much beauty not its own, beauty of a derivative and subsidiary sort. Where else than in hilly districts are found deep lakes, broad moors, rushing streams, and all the glory of the woodlands? Thus in North Wales you will find not only the grandeur of Snowdonia, but equally the mystery and eeriness of lakes like Idwal and Llydaw-the exquisite beauty of streams like Idwal and Llydaw—the exquisite beauty of streams like the Llugwy, the Conway, and the Dee—the refreshing greenness of well-wooded spots like those round Bettws-y-Coed—and the satisfying peace of such valleys as those of the Gwynant and the Clwyd. But the source of all this beauty is in the hills. Where flatness is you shall find none of it.... Now the route we are about to describe brings us into touch with scenes among the fairest and grandest in the whole of the United Kingdom—some of them unsurpassed throughout the world. Briefly let us review the general features of the country we are about to pass through. Standing near the Welsh border, at its northern end, and looking westward, one notes a range of hills running, roughly, north and south from the sea. This is the Clwydian It extends from Prestatyn on the coast to en in the south. The highest point is Moel Llangollen in the south. Llangollen in the south. The highest point is Moer Fammau, conspicuous and easily picked out at considerable distances, though only 1,850 feet in height. The summit is marked by a hump—the remains of a tower, of which more in the sequel. Thirty miles to the west are the multitudinous peaks of Snowdonia, famous wherever the beauties of earth and sky are appreciated. wherever the beauties of earth and sky are appreciated. Between the Clwydian range and Snowdonia comes a ridge sloping gently to east and west, and, like the Clwydian range, running, roughly, north and south. It rises to no great height—nowhere to much more than a thousand feet—and, thanks to the absence of abrupt slopes, looks even lower than it really is. It is known as Mynydd Hiraethog, which means the Ridge of Longing, so called from the attraction exerted upon the wayfarer on the one side by the summits of the Snowdon range, and, on the other, by the hill-tops of the Clwydian series. Our route cuts the Clwydian range near its series. Our route cuts the Clwydian range near its southern end, ascending by a pass which rises to a height of nigh upon a thousand feet just south of Moel Fammau; climbs next over the Hiraethog ridge; passes over the watershed of Dee and Conway; descends to the bottom of the Conway valley, and is now under and to the right of Snowdonia; proceeds to the coast along the Conway valley; and finally returns eastward along, or near, the margin of the sea. We shall describe the scenery en route, and make some remarks upon the townships passed through. But first let us see what there is to interest us before Wales is reached.

Leaving Rock Ferry, the first place to be noted is Port Sunlight. Here are the huge works of Lever Bros. Ltd., where are manufactured Sunlight and Lifebuoy soaps and all the Vinolia preparations. There is a model village, many of whose houses are detached, or semidetached, and which are provided with gardens. Here we see an experiment—one of the first to be made in England—in town planning. All the houses have been designed by competent, and, in some cases, by famous, architects, with a view to beauty as well as to utility. In the centre of the town—no longer a village—stands a beautiful Gothic church (Nonconformist, however) erected by Lord Leverhulme some twenty years ago. There is also an astonishing art gallery erected in memory of the late Lady Lever, where may be seen pictures by Turner.

Constable, Reynolds, Velasquez, Leighton, and many other great painters, together with much exquisite and rare china, and a good deal of old and curious furniture—treasures to the value of a quarter of a million pounds sterling. . . . We are still on the Mersey estuary, and the busyness of the district is only too apparent. The traveller will note a large, fine, solidlooking works a mile beyond Port Sunlight. a margarine factory, also controlled by Lord Leverhulme. a margarine factory, also controlled by Lord Levernuine. Numerous works and factories are seen all along this part of the route. . . In a couple of miles we are at Eastham—a place full of interest. Here is the entrance to the Ship Canal, which makes Manchester a port by connecting it with the sea, or rather with the Mersey estuary. It was opened by Queen Victoria in May 1894, having taken twelve years to construct. Operations were commenced only after the defeat of the persistent and powerful opposition of such interested parties as railway companies and the port of Liverpool authorities. But the canal has been a good thing for the trade of Manchester, even if its promoters have not received the full measure of the rewards they deserved and were entitled to expect.



(Based upon the Ordnance Survey Map, with the sanction of the Controller of H.M. Stationery Office.)

The canal is $35\frac{1}{2}$ miles in length; it has a minimum depth of 28 ft.; its minimum width at the bottom is 120 ft. At Eastham (where we still are) the canal is entered from the estuary by means of three parallel locks, whose gates stand open at full tide. In making the canal the engineering difficulties were considerable. For the first fifteen miles the canal is actually in, or bordering on, the estuary. Rivers flowing into the Mersey could no longer discharge their waters, for the canal stood at a higher level. Accordingly the waters of several small rivers were led, by means of inverted siphons, under the canal and discharged into the estuary just beyond. Again, the canal cut across five lines of railway. Large ships with tall masts had to sail right along to Manchester, and, as swing bridges were deemed inconvenient and dangerous, the railway lines were lifted to a considerable height above the canal on fixed bridges, and new embankments of suitable gradient were constructed on either side. Then there was a small canal which had somehow to be carried over the Ship Canal, and as this could not be carried at a height, there was constructed the first swing aqueduct; this may be seen at Patricroft, where it carries the not unimportant Bridgewater Canal over the Manchester Ship Canal. The reader who likes hard facts will learn with interest that in making the canal 54 million

cubic yards of earth were excavated, 17,000 men were

employed, and 15½ millions of money were expended.

We cross the Wirral peninsula and touch the Welsh border two miles before reaching the village of Queensferry, where we cross the Dee within a mile of the point at which it empties itself into the suddenly widening estuary. The observer will pick out the post on the roadside which marks the point at which England ends and Wales begins. The bridge which carries us over the Dee is provided with a sliding roadway to permit of the passage of vessels. It was opened by Gladstone in 1897 (his last public appearance), and it replaced a ferry which had existed for many generations. Beyond and slightly to the left stands the delightful village of Hawarden. Here Gladstone lived, here he died; here was the place he loved more than any other. Standing on the flank of a hill, it commands wide views, embracing the flank of a hill, it commands wide views, embracing the Clwydian range, the Dee estuary, the Wirral peninsula, and the plains of Chester. The castle—now a ruin—is of considerable antiquity. Here, for example, Llewelyn capitulated to Simon de Montfort. The church is conspicuous for many miles, and is of a pleasing Gothic design. The St. Deiniol's Library is likewise a beautiful building, and contains nearly the whole of the late Mr. Gladstone's library. It was erected as a national memorial to the G.O.M. Most beautiful of all are the modern Hawarden Castle and Park. The latter is full of attrac-



NEAR MOLD.

tive rambling places, and is made much of by the summer visitor in search of natural beauty.

Our next point is Mold, and if we go viâ Northop, at the expense of an extra mile or so, we shall escape the collieries sprinkled hereabout, which do so little to enhance the natural charm of the countryside. Northop is one of those old villages round which are grouped some fine residences. It was from Northop that the ancestors of that great Welshwoman, George Eliot, came. (Her name, of course, was Mary Ann Evans.) But we are now nearing Mold, a market town of 5,000 inhabitants, whose only feature that need detain us is the fine church, built in the reign of Henry VII. and restored by Scott. For some time we have had the Clwydian range in view, Moel Fammau (pronounced "Vamma") being doubly con-spicuous by reason of the ruin on its summit. After a few miles we shall cross the range a little south of Moel Fammau and proceed to Ruthin. A featureless road out of Mold takes us to an ancient hostel, very charmingly situated, which has given its name to the district—as Hunter's Inn, for example, in North Devon has. It is known as the Loggerheads Inn, and has a sign, painted more than a century ago by Wilson, depicting two heads back to back with the inscription "We three, loggerheads be"—the third "loggerhead" being the spectator. It is imperative that we alight at this delectable spot and look around, even if it be only for a few minutes. Round about are some of the choicest and best known bits of scenery in England and Wales, and innumerable are the parties which come here all the year round on a pilgrimage of Nature-worship. On our right is a stream, the Alyn. You may follow it by means of a footpath for $2\frac{1}{2}$ miles along the famous Leete Walk, in part precipitous, in part

wooded, in other parts offering vistas of the bracing uplands: throughout its whole length affording a delicious ramble all too short. . . . But time-tables are of all things the most inexorable, and we must move on.

The road has risen since we left Mold, and is destined to rise still further in reaching Ruthin. We skirt two



THE LEETE.

hills to the south of Moel Fammau; their names are Fron Hen and Foel Fenlli. The road is comparatively new and has fairly easy gradients. The old road is steeper and far more picturesque; delightful for the pedestrian, it is impossible for vehicles since it is unfenced on the side which falls precipitously for 150 ft, This old road runs between Foel Fenlli and Moel Fammau. Should you stroll along it you may notice, as Ruthin comes into view, a clump of trees in a deep recess below the road. This is known as the Irishman's Grave. It is related that the driver of the mail coach, an Irishman. had "liquored up" at the last calling-place-probably the Loggerheads-and had driven not wisely but too recklessly, so that the coach was precipitated to the valley below, with fatal consequences.

For some time we have been near the foot of Moel

Fammau, the ruin or hump on whose summit may have awakened curiosity. It represents the remains of a tower erected in 1810 to commemorate the jubilee of George III. It was a massive and tall structure, nearly 150 ft. in height, and was blown down in 1862. The remains afford a convenient shelter, but add nothing otherwise to the attractiveness of a very charming hill-top, from which may be seen the mountains of Snowdonia; the lovely Vale of Clwyd extending from Corwen to the sea at



SUMMIT OF MOEL FAMMAU.

Rhyl, with the Hiraethog hills behind; the sands of Dee; a large portion of Cheshire, and the Derbyshire hills beyond. . . . But by this time Moel Fammau is behind us. We have passed through the villages of Llanferres and Llanbedr (note the quaint little church at Llanbedr), and we have at last reached Ruthin (pronounced "Rithin"), a market town of nearly 3,000 inhabitants situated on rising ground on the left bank of the Clwyd. Ruthin Castle dates back to the thirteenth century. It figured in the fights waged against Owen Glyndwr; it was held for Charles I. in the Civil War, but, like the neighbouring castles of Denbigh and Rhuddlan, it capitulated to the Roundheads. The old portion is a ruin; the new, inhabited part is but a century old and is of severe



LIANEWROG

Elizabethan style. The church, St. Peter's, has a history extending backwards likewise to the thirteenth century. The present edifice is, however, modern, the only old part being the base of the tower. . . Leaving Ruthin our next destination is Cerrig-y-Druidion (pronounced "Drid-ee-on"), fourteen miles away, the road going right over the Hiraethog hills. The maximum height of 1,000 ft. is reached in six miles, just beyond the little village of Clawdd Newydd. The first part of the road passes through a succession of woods; for some distance the ground slopes away steeply on the left hand to a rushing stream below. On this, the Clwyd, side of Hiraethog the land is fertile, yielding varied crops, and is in marked contrast to the western slopes, where they run towards Snowdonia and where is nought more fruitful then moorland, affording a scanty food supply for few sheep or fewer Welsh ponies. As we move towards Snowdonia and pass over the summit of the ridge the change from fertility to barrenness is clearly marked. Presently come hundreds of acres of grouse moor, with an occasional lake or stream. Away on the hills to the right is a magnificent shooting-box, the size of a decent hotel.

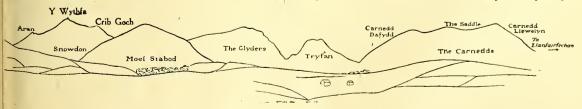
We now descend to the village of Llanfihangel, through which flows the river Alwen. This is a much-sought-after fishing centre. There is a magnificent trout pool immediately below the bridge which carries our road over the river and within a few yards of the Crown Inn, residence at which includes the right, gratis, of fishing along the Alwen River for eight miles. The Alwen River flows out of Lake Alwen (which lies to the north-east high upon the moors), and into the Dee just above Corwen. Lake Alwen is the reservoir which supplies water to the town of Birkenhead. At the present time a new line of pipes is being laid. It can be reached by walking over the hills from Cerrig-y-Druidion, or from the pleasant road which runs from Denbigh to Pentre Voelas. As we approach the village of Cerrig-y-Druidion we get for the first time a magnificent panorama em-

bracing all the principal mountains in the Snowdon district. Away on our extreme left are seen the Arenigs. Next, to the right, are a group of smaller hills, which need no denomination. Then follows a scene which constitutes a veritable feast of the gods. First comes Snowdon, with three peaks showing, Aran, Y Wythfa (on which the hotel can be distinguished in clear weather), and Crib Goch; then comes Moel Siabod ("Shabbod");



POOL IN THE ALWEN.

then the Glyders; then Tryfan ("Truvan"); and finally Carnedd Dafydd and Carnedd Llewelyn. Each peak, except Aran and Tryfan, is over 3,000 feet in height, and they are little below that mark. The "panorama" which is here reproduced is drawn from the road midway between Cerrig-y-Druidion and Pentre Voelas, but may be used at the present point (just above Cerrig), as the outlines are not very different. Cerrig-y-Druidion, a village beloved of anglers, is prettily situated in a depression among the hills; when actually in the village the peaks of Snowdonia are hidden, but a considerable compensation is had in the lesser heights which spring up on every hand. Here, too, we join the celebrated Holyhead road—the highway connecting London with Holyhead and so with Ireland. Dick Turpin is said to have operated largely upon this highway, and at the "White at Cerrig-y-Druidion mine host will show you the pewter mug from which the celebrated highwayman is supposed to have quaffed his ale. The next considerable village is Pentre Voelas, six miles further on. This part of the journey affords the best view of any, throughout our run, of Snowdonia. Three miles or so more and we reach Pentre Voelas. This also was an important point from which roads branched off in several directions. There is a fine old inn here, the Voelas Arms, important yet and much sought after by the tourist. Six miles south-west of Pentre Voelas is a lake half a mile long, standing some 1,400 feet above sea-level. It is called Llyn Conway—Lake Conway—and out of it flows the Conway River. A mile out of Pentre Voelas we cross this river, and it keeps us company the whole way to Bettwsy-Coed—and afterwards, of course, to the sea, as we move along the Conway valley and estuary. The road steadily descends, sinking deeper and deeper into the valley, till at last we reach the place which is by far the most famous of any upon our route—Bettws-ymost famous of any upon our route—Bettws-y-Coed. This place has been an inspiration to poets and painters for centuries. In this neighbourhood, for example, B. W. Leader has found the subjects of perhaps



THE PEAKS OF SNOWDONIA.

a majority of his pictures. David Cox "painted" it over a period of forty years. Its refreshing beauty and bracing quality are found reflected in the poems of Kingsley, T. E. Brown, and a host of minor versifiers; while its praises have been shouted by thousands of prose writers from Borrow onwards. Bettws-y-Coed lies in a deep, green valley and stands at the meeting-place of two superb streams, the Conway and the Llugwy. The latter is especially entrancing. Its steep banks are lined with



NEAR PENTRE VOELAS.

the richest foliage; at many places trees overhang its waters; its bed is boulder-strewn; and waterfalls of rare beauty are found along its course. These things may be sampled at the Fairy Glen, the Miners' Bridge, and at the Swallow Falls.

If, instead of continuing along the Conway valley, we take the road going westward (keeping to the old Holyhead road), we reach Capel Curig, and may proceed to the famous Pen-y-Gwryd Inn, beloved of Kingsley, Judge Hughes, and Tom Taylor, or to Pen-y-Pass in the Pass of Llanberis, or to Beddgelert, or to Ogwen Lake and the Devil's Kitchen, or indeed to a hundred wild and romantic places. Hereabout the chief pursuits are rock-climbing, mountain-scrambling, walking, and fishing; and always there is the jolly inn, with its reunion round the dinner-table at about 8 p.m. Capel Curig is the best centre for "doing" the Snowdonia mountains; Snowdon herself, Siabod, the Glyders and Tryfan, the Carnedds, and all the outlying hills can be conveniently reached from Capel Curic or by meter from Pettyrs y Code.

from Capel Curig, or by motor from Bettws-y-Coed.

We now pass down the Conway valley to the sea, a distance of fifteen miles. At its northern end it widens to an estuary some two and a-half miles long and half a mile wide. Upon the estuary, a mile from the open sea, stands the old town (once a garrison) of Conway. Three miles further north there juts out into the sea a magnificent rocky promontory, three miles in circumference and 687 ft. high; this is the Great Orme's Head, at whose foot nestles that well-known watering-place, Llandudno. The Conway is tidal as far as Llanrwst, a small market town five miles further down the river from Bettws-y-Coed. The Conway valley is little more than a mile wide through three parts of its length, though it widens considerably as the coast is neared. Llanrwst is on the extreme right of the valley, and nearly opposite, on the extreme left, is the little Welsh spa of Trefriw ("Trevru "), through which we pass. It is famous for its chalybeate wells, which are the source of the strongest natural iron-waters to be found in the United Kingdom. There are two wells, one yielding a strong and the other a mild chalybeate water. In both the iron is found as ferric sulphate, and the milder contains magnesium and calcium sulphates also, and is slightly aperient. The stronger water has a rich brown colour, and the dose (most people's maximum) is only one tablespoonful—a circumstance which has led to an extensive trade in the bottled waters. Passing through the villages of Dolgarrog and Tal-y-Bont, we come to a church marked Caerhun upon the map. It stands away from the road on our right in a little en-closure near the river. Attractive in itself, it is of

special interest inasmuch as it marked the site of the Roman camp of Conovium. The Romans, indeed, were very familiar with this part of the country. They built an excellent road, still in fine preservation, from Cono-vium through what is now called Roe Wen and over the Bwlch-y-ddeufaen, between the heights of Tal-y-Fan and Y Drosgyl, skirting Carreg Fawr, and down to Aber. The idea was to make a connecting-link between the Menai Straits and the Conway valley. Along this Roman road, a mile beyond Roe Wen, is to be seen a cromlech in magnificent preservation. At Tal-y-Cafn ("Tally-Caven'') a graceful bridge carries over the river the only road which crosses the valley between Conway and Llanrwst. And now Conway comes into view. Its chief features are its fine castle and walls. They were built in 1284 for Edward I., by Henry de Eireton (who also built Carnarvon Castle). It was from Conway that Richard II. made his fatal journey to Flint Castle, where he capitu-lated to Bolingbroke. During the Civil War it was held for Charles I., but, like the castles of Denbigh, Ruthin, and Rhuddlan, it was surrendered to Oliver's forces. At Conway is to be found, perhaps, the finest Elizabethan house in England or Wales—Plas Mawr ("the great mansion"), as it is called. It bears the date 1585. In that year it was built by Robert Wynne of Gwydir. But Conway is by no means solely of interest for its historic associations. It is charmingly situated and commands fine and varied views. Standing upon the bridge which carries the road over the Conway River, and looking south, a fine panorama is to be had. From this point of vantage the Conway valley and the surrounding hills form a picture which the nature-lover can scarcely forget.

If time permits, the journey will extend to Llandudnoonly three miles away. This is a well-known wateringplace endowed with much natural beauty. Several alternative roads outwards present themselves. Any one of
them takes us to a smaller and well-sheltered wateringplace—Colwyn Bay. Our road now rises to the top
of a headland which falls precipitously into the sea,
and descends to Abergele, a quiet seaside village, where
promenades and piers and big hotels are not. Three miles
further on is the little seaside town of Rhyl. At Rhyl we
leave the coast and run inland down the vale of Clwyd for
four miles to the village of Rhuddlan ("Rith'-lan"),



RHUDDIAN CASTLE.

whose castle, raised above the right bank of the Clwyd, cannot fail to arrest our attention instantly. It was originally a Welsh stronghold, and was built in the eleventh century. It was taken from the Welsh, retaken, taken again, and finally retaken by Edward I., who rebuilt it in 1277. It was here that Edward I. held a Parliament whence he issued the "Statute of Rhuddlan" which was a sort of constitution for the governance of Wales. Richard II. was a prisoner here in 1399. Three miles further on we reach Dyserth, a quiet village among the hilds, which boasts a rather fine waterfall. It is said to owe its name to the Latin word desertum—the Romans being supposed to have abandoned a camp which they had formed here. A couple of miles more and we are at

Newmarket, whose Cop-a tree-crested hill-is said to mark the grave of Boadicea. In a few minutes we are at Holywell, famous for its Well of St. Winifred, whose waters are credited with many miraculous cures. The water is not medicated—it is quite pure—and it flows at the rate of 30 tons per minute. The church—Late Perpendicular—was built by Margaret, the mother of Henry VII. . .

Rapidly we reach Flint, famous for its castle, now all too ruinous, in which Richard II. surrendered to Bolingbroke. We are soon crossing the Dee at Queensferry. At

last we are home again.

POSTSCRIPT.

As has already been remarked in the text, a new line of water-pipes is at the present time being laid between the town of Birkenhead and the Alwen reservoir (necessitating, by the way, the making of a new tunnel under the Dee estuary). This means, among other things, that the road running between Ruthin and Cerrig-y-Druidion is in a bad state for motor traffic; at least, so it was when the present writer walked over it early in May. He then found a sloppy, shifting road surface, and a generous supply of ruts about a foot deep. It is probable that in July, after a period of dry weather, the road may be hard enough for motor traffic-as, indeed, is to be hoped—as much would be missed in adopting an alternafive route. But, if the worst happens, a slight change of itinerary will be necessary. We shall proceed to Ruthin exactly as described in the foregoing article. We shall then, having imbibed the beauty (and otherwise) this little town has to offer, proceed along the Vale of Clwyd as far as Denbigh. This is a market town of 3,000 inhabitants, and possesses the ruins of a fine castle, to which reference has already been made more than once. From Denbigh we make for Pentre Voelas by a road which goes over Hiraethog in a direction roughly parallel to that connecting Ruthin with Cerrig-y-Druidion. From Pentre Voelas we proceed, as already described, to Bettws-y-Coed, and so onward. Although the Denbigh-Pentre Voelas road is extremely pleasant throughout its whole length, running as it does for many miles through a magnificent grouse moor, its attractiveness offers no adequate compensation for the loss of scenery occasioned by an abandonment of the original route. More particularly this alternative route allows of only inferior views of Snowdonia; in other words, it more than half misses the "choicest morsel" of the excursion. Four miles this side Pentre Voelas a fine view is had of the Alwen reservoira long, narrow lake stretching away on our left. . . . If, then, it be found necessary to adopt this variation, a careful look-out must be made as Pentre Voelas is approached, and when the best view-point is reached, and Snowdonia is seen to the greatest advantage, it is recommended that a halt be called, so that as good a view as possible of this world-famous range may be had.

It may also be necessary, on the homeward route, to make another slight modification. Instead of going through Dyserth and Holywell, possibly the alternative route may be taken by way of St. Asaph, and then along the valley which connects Mold with Denbigh and forms, as it were, a tributary to the Vale of Clwyd. In this way we should pass through Bodfari, Nannerch, Caerwys, Rhydymwyn, and Mold, thence retracing our footsteps of the morning. In moving from Mold to Ruthin, thence to Denbigh, and then viā Bodfari and Caerwys to Mold again, we shall have made a complete circuit of Moel Fammau. The valley of which we are now speaking is full of charming and secluded spots, and is much esteemed by the holiday-maker in search of silent rustication. . Just a word, however, about St. Asaph. This is a mere village (population 1,500), and yet, of course, it rejoices in the knowledge of being a cathedral city! The cathedral is not bigger than an ordinary parish church. The present writer sets down these observations upon June 1a very glorious day in the history of St. Asaph, since it witnesses the enthronement of her bishop as the first Archbishop of Wales.

The photographs used in this article were taken by Mr. R. Cecil Owen.

Fourteen Points for Chemists' Assistants.

1. Couriesy is one of life's finest lubricants. Wait on customers pleasantly; address them by name if possible. No matter how hurried you may be, let each customer feel that you are personally interested in attending to his or her needs.

2. Remember your own experience as a purchaser in other shops. How often have you thought of something clse you needed after leaving the shop! Customers have a right to expect your encouragement and assistance. They appreciate advice and suggestions if tendered

courteously.

3. Never substitute. If a person deliberately comes into your pharmacy for a specific article produce the preparation asked for instantly. While wrapping it up you have the opportunity of showing your own pet product, but you must produce the article asked for first.

4. Know where to find things in the pharmacy. It is exasperating to a customer to see an assistant opening half a dozen drawers before finding the preparation required. So many assistants spend more time on wrapping-paper and sealing-wax than in attending to customers efficiently.

5. Learn to talk intelligently about the goods you have to sell. Find out when to recommend a light face-powder and when to suggest a heavy one. Do you know the different purposes of a cold cream, massage cream, and

vanishing cream?

6. Remember that the pharmacy exists for the benefit of the public. Without the customers there would be no business, and without business you would have no job.

Therefore allow the customer always to be right. If she says "Paul Maul" or "Pell Mell" you follow suit.

7. Add something permanent to your line of effort, whatever it may be. Let it be said of you when you have left your position, "Here is a system Mr. — intro-

duced."

8. Try to be above the average. If it is true that the average assistant does not use more than 25 per cent. of his energy and ability it is those who use 50 or 75 per cent. who become most successful.

9. Be absolutely loyal to the interests of the man for whom you are working. Your welfare is his welfare, and loyalty is a great asset in business. Never discuss your

employer's affairs with outside people.

10. Become familiar with up-to-date costing systems. Remember that no pharmacist can afford to invest his money either in service or goods that are unprofitablein other words, he would not remain long in business if he attempted to pay you more than you are worth.

11. Be progressive. Find better ways of doing things. Success in pharmacy or any other business comes to those who look ahead and go just one better than the other fellow. If a thing is worth doing at all it is worth doing

12. Cultivate a spirit of enthusiasm and optimism. The percentage of sick customers in a chemist's shop is small, but hand over that cough mixture as if you knew it would relieve the most violent fit of coughing imaginable. Faith has great healing power.

13. If you expect to have a business of your own begin now to see yourself the owner of a pharmacy. The assistant without a vision of something larger and better

will always be an assistant—and a poor one at that.

14. Finally, read and study carefully the business articles in The Chemist and Druggist, because you cannot learn too much about the drug business. You may not have realised that it is after leaving college your business education commences.

VIATOR (1/11.)

THE FINNISH PHARMACEUTICAL ASSOCIATION, Helsingfors, has adopted a resolution for presentation to the Government against the proposals for the conversion of private pharmacies into State property or into municipal ownership. The association also asks that the pharmacies may be exempted from the sale of alcohol.



The Relation of Pharmacy to Chemistry,



as shown in the careers of some eminent modern chemists.

In defence of our right to the title "Chemist" it has been urged that modern chemistry took its rise in pharmacy, a fact which cannot be gainsaid. As Professor Ernst von Meyer says, "Pharmaceutical chemistry is, in fact, connected in the most intimate manner with pure chemistry, for both have the same foundation." More than that, from the time of Robert Boyle, "the father of modern chemistry," many of the most famous chemists have entered this science by the door of pharmacy, or, as von Meyer again says, pharmacy was for a century or more "an Alma Mater for chemistry"; and, although their relation is now reversed, they continue to progress together.

Boyle avowedly pursued the study of chemistry apart from both alchemy and medicine, but he experimented in

medicine nevertheless. His contemporaries and immediate followers, Kunkel and Lemery, were pharmacists; Stahl (the originator of the phlogiston theory), Hoffman, and Boerhaave were physicians; Geoffroy began life as an assistant in his father's drug-shop; Marggraf was an apothecary; Rouelle, who had for pupils both Lavoisier and Proust, was a pharmacist; Scheele was an apothecaries' or pharmacists' assistant nearly all his life. We can hardly see the relation of medicine and chemistry at this stage better than in the history of the wonderful



Gmelin family. Its founder, Johann Georg Gmelin (born 1674), was an apothecary at Tübingen; of his three sons, Johann Conrad followed his father's profession, Johann Georg was Professor of Chemistry at St. Petersburg and afterwards of Medicine at Tübingen, and Philipp Friedrich was Professor of both sciences at the same university. Of their sons, one, Samuel Gottlieb, was Professor of Natural History of St. Petersburg; another, Christian Gottlieb, the first manufacturer of ultramarine, was Professor of Chemistry and Pharmacy at Tübingen; and nother, Philipp Friedrich, Professor of Chemistry and Medicine at Göttingen. The thirteenth edition of Linnaeus's "Systema Naturæ," with many emendations and additions, was his work. His son Leopold (1788-1853), the most famous of the family, the discoverer of potassium ferricyanide, was Professor of Chemistry and Medicine in the control of the cont cine in various universities.

Returning a little, we find our own Black, both a physician and a chemist of outstanding importance in the history of the science. Klaproth, born at Wernigerode in 1743, is of still greater importance. He was an apothe-cary until 1787, but his great work was in chemistry. He was a follower of Lavoisier in his opposition to the phlogiston theory, and did much to elucidate the chemistry of minerals. Like Vauquelin, he aimed at their proper classification, and his researches led to the discovery of many important elements. He was the first Professor of Chemistry in the University of Berlin.

Berzelius is a still greater figure. He was born at Wäfversunda, in Sweden, August 29, 1779. He began as a student of medicine, and in 1802 was appointed Professor of Medicine and Pharmacy at Stockholm, being afterwards advanced to the chair of chemistry. His work, both as researcher and teacher, is too well known to need recapitulation.

Proust was a native of Angers, born in 1755, the son of a pharmacist, whom he assisted in his business before being himself appointed pharmacist at the Salpêtrière in Paris. He was one of the early aeronauts, and in 1784 made a flight with Pilâtie de Roziers to Spain in a ballon à air chaud. He did much of his best work





while Professor of Chemistry at Madrid and Segovia; but the war between his native and adopted countries drove him back to Paris, where he was received into the Academy of Sciences. His most important work was done in connection with his controversy with Berthollet on the subject of the proportion of the constituents of chemical compounds. Proust conclusively proved their constancy. Berthollet, it may be added, graduated in medicine before taking up the special study of chemistry.

Fourcroy is another French chemist whose first studies were in medicine. So, too, with his more famous assistant, Vauquelin, who was an apothecary's apprentice, or, as Wootton puts it, a laboratory boy to a pharmacist at Rouen. He discovered several new elements, and did very valuable work in organic chemistry, opening the way to the separation of alkaloids. Pelletier also was a pharmacist and the son of a pharmacist. Dumas (Jean Baptiste André) was another of the same calling. Apprenticed to an apothecary in his native town of Alais, he found the work uncongenial, and in the year 1816, when only sixteen, set out on foot for Geneva, where he came in contact with Pictet, De Candolle, and other scientists, and was diverted into chemistry. Subsequently, by Von Humboldt's advice, he removed to Paris, where he became famous, especially as a teacher and writer, his personality having apparently been a great factor in his success in the former capacity, and the charm of his style adding much to the influence of his writings. He came badly out of his attempt to alter the atomic weights in opposition to Berzelius, but redeemed this youthful blunder by excellent research work in later years.





Justus Liebig, "one of the most distinguished investigators of any time," was born at Darmstadt in 1803, and apprenticed to an apothecary at Appenheim, near that town. His master, however, speedily released him from his indentures, alarmed by the explosions and other violent incidents which accompanied his chemical experiments. For some time he found it impossible to continue his chemical studies apart from the business he had thus abandoned. Neither at Bonn nor Erlangen was there any systematic teaching of the science, and after two years of academic study he went to Paris, where Gay-Lussac,

Vauquelin, and others were hard at work. He got into work on the fulminates along with the former of these, and in 1824 was called to a professorship at Giessen, where he remained for twenty-eight years. In 1852 he removed to Munich as Professor in the University there, where he was relieved of much of the labour of teaching and able to give himself more entirely to research.

and able to give himself more entirely to research. Friedrich Wöhler, born three years before Liebig, and associated with him in much of his work, began life as a student of medicine, and, though early induced by Leopold Gmelin to devote himself to chemistry, graduated as a doctor. After a year of study with Berzelius at Stockholm he reurned to Germany in 1824 as a teacher in the Technical School at Berlin, whence he removed to Cassel and afterwards to Göttingen, where he remained, attached to the University, for the rest of his life. He is inseparably connected with Liebig in the history of chemistry, and their lifelong friendship is perhaps the most charming trait in the history of both.

We have as yet said little of our own country, to which it is now time to turn. Boyle's friend Sydenham can





hardly be classed among chemists as we now understand the term, for he held that chemistry should concern itself with medicine only. As a medical man he was by no means orthodox, and his fellow-physicians, or many of them, regarded him as a quack. It must be allowed that, learned as he was—he had studied medicine at Oxford, and it is believed at Montpellier, and was a Fellow of All Souls—his methods were decidedly empirical.

A thorough chemist was Joseph Black (already referred to), born in 1728. He studied medicine at Glasgow, and under the tutelage of William Cullen, whose assistant he became, acquired his first knowledge of chemistry. He took his medical degree at Edinburgh. In his graduation thesis, a treatise which his editor, Professor Robison, placed sccond only to Newton's "Optics" as a model of scientific research, he announced his discovery of "fixed air" (carbonic-acid gas), but in spite of this and his subsequent discoveries he modestly shrank from formulating any system, on the ground that chemistry had not yet attained the rank of a science. Continuing to practise as a physician he persisted to the end in his chemical work, and by his theory of "latent heat" led the way to the inventions of James Watt.

Sir Humphry Davy (1778-1829) is another chemist of the highest eminence, who began as an apprentice to an apothecary and surgeon. This was at Penzance. He had already received some irregular teaching in science from a working saddler, Dunkin by name, who had a natural genius for electrical research, and who made his own tools—the ability to do which has been styled the distinguishing mark of genius. Davy, like Liebig, was unlucky in the effect of some of his early experiments; his frequent explosions alarmed his house-mates and caused one of them to predict that some day or other he would blow them all up. He is said, too, to have been very disputations and difficult to silence in his attacks on received opinions, besides which he was a poet, and made his first bow to the public in that character while still a young apprentice. His poem, "The Sons of Genius," and others that followed, attained a good deal of popularity, and he never lost his love of literature, which won him the friendship of Wordsworth and many other famous men of letters. His achievements in science are too well

known to need recapitulation.

William Thomas Brande (1788-1866) comes next on our list. He was the son of an apothecary, and though

intended for the Church, chose his father's profession. Apprenticed to his brother, he received from him during the five years they were together the greatest possible discouragement in his study of chemistry. Every obstacle





was thrown in his way; like Keats, but with more authority, he was bidden "go back to his gallipots," and it was only in his own bedroom when his day's work was done that he could follow his chosen pursuits. His first publication, a paper on benzoin, appeared in "Nicholson's Journal" in 1805. In the same year he read a paper on guaiacum resin before the Royal Society, of which he became a member in 1809. In 1812 he was appointed Professor of Chemistry to the Apothecaries' Company.

James Muspratt (1793-1886) before he founded his soda-

works at Liverpool had had an adventurous career, comparable to that of the hero of a rattling picaresque novel. The future founder of the alkali industry was born in Dublin, of English parents, and went to a commercial school in that city. He was then apprenticed to a whole-sale chemist and druggist there of the name of Micheltree, with whom he remained three or four years. On his father's death in 1810 he tried to get a commission in the army, and not succeeding, went off to Spain as a camp follower in the war then going on. He narrowly escaped capture by the French at Madrid, whence in wretched plight he tramped all the way to Lisbon. After this he enlisted in the Navy, but being, like Markham, disgusted by the brutal treatment the sailor of that day received, he soon afterwards deserted and made his way back to Dublin, where for some years he lived in a literary circle to which Samuel Lover and James Sheridan Knowles, the dramatist, belonged. This led him to embrace literature as a profession until, in 1818, his succession to the family property enabled him to enter the presumably more lucrative one of chemical manufacture. Beginning in a small way at Dublin, chiefly as a manufacturer of prussiate of potash, he seized the opportunity afforded by the abolition of the salt tax in 1823 to establish the Liverpool soda-works by which he became Another well-known name in connection with the soap trade naturally occurs to us here, that of William Gossage, who was at one time in business as'a chemist at

This article (though we have omitted many names that ought to have been included) is running to an unforeseen length and might be indefinitely prolonged. A few names only can be mentioned before we close. Allen and Luke Howard (who may be selected as types of a class), though they remained distinctively pharmacists, were true chemists throughout their career and deserve mention along with those we have been considering. Richard Phillips, editor of our London Pharmacopæias of 1836 and 1851, as well as of other scientific publications, was an apprentice of William Allen's in Plough Court, and for some years carried on a business of his own in the Poultry. For other instances of the evolution of the chemist from the pharmacist (a phrase, by the way, which concedes too much to our friends the self-styled "professional" chemists) we may refer to our own columns chemists) we may refer to our own columns during the sixty years of our existence. Other names besides those to be found there could be furnished both from our own country and abroad, but with the living we need not deal. One further notable name will bring our brief résumé to a fitting close, that of Louis Pasteur. life as an apothecary's apprentice, and it was while working with tartaric acid that he became interested in fermentation and thus laid the foundation of his future

discoveries.



Pharmaceutical Book-plates.





Fig. 1.

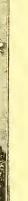




Fig. 6.



FIG. 3.



Fig. 4.



Fig. 2.



Fig. 7.



Fig. 5.

Under this head we published in 1904 (Vol. 65, pp. 216 and 217) a short article on pharmaceutical book-plates, having been incited thereto by specimens sent to us from abroad which we had published from time to time in the year 1902 (Vol. 62, pp. 670, 902, 982). These and our subsequent article, with its illustrations, excited a good deal of interest, and for a year or two we continued to receive specimens from various quarters. Nearly all of them were foreign, many of them were book-plates of be identified as having belonged to individual English pharmacists as distinguished from apothecaries and physicians. The whole series appeared in volumes exby the states appeared in volumes extending from 62 to 71 inclusive, and such further researches as we have been able to make have brought to light no further specimens of book-plates of English pharmacists, though every known available source has

been ransacked, including the classic works on the subject of Lord de Tabley, Messrs. Hardy and Castle, the journals of the Ex-Libris Society, various encyclopædias, and many volumes of the huge collection in the Print Room of the British Museum, with the three volumes of the Catalogue. We should add that none of the dated speci-Catalogue. We should add that none of the dated specimens of English pharmaceutical plates we have seen is later than the eighteenth century, and that two of the plates reproduced in our article of 1904 were not real book-plates, but trade cards used as such. It would thus appear that English pharmacists rarely, if ever, show their appreciation of books in this particular

Nor is the case very different, apparently, in foreign countries, though it is not quite as bad. Shortly before the war broke out we received from M. Le Docteur Eugène Olivier a copy of an essay read by him before the Société

française des Collectionneurs d'ex-libris et de reliures artistiques on the subject of the book-plates of medical men and pharmacists of former times, in which only about a page is devoted to mere pharmacists, and only two of their plates are reproduced, the remaining sixteen of the illustrations being of medical plates; several of these, however, are of some pharmaceutical interest. M. Olivier explains the paucity of pharmaceutical plates pure and simple by the fact that in the eighteenth century "les pharmaciens moins célèbres et plus modestes utilisèrent leurs marques commerciales comme ex-libris." Extibris, as most of our readers know, is the invariable term used abroad for book-plates; the latter name first appeared (says Mr. Egerton Castle) in an English dictionary in 1838, and very little earlier than this is the first independent work on book-plates, the late Lord de Tabley's "Guide," published in 1880. The earliest known article upon them was published in the "Gentleman's Magazine" in 1822. The Oxford English Dictionary has a quotation for the name "book-plate" from Ireland's "Hogarth Illustrated" (1791), this being no doubt the occurrence of the word in a dictionary to which Mr. Castle refers. The earliest French publication on the subject was somewhat later than ours, though book-plates are known to be almost as old as printed books themselves. The oldest known specimen is still the one referred to in our article of 1904, that of Brother Hildebrand Brandenburg in the Carthusian monastery at Burgheim (1480). One of the earliest is that of Cardinal Wolsey (1525). Another famous English specimen is that of Nicholas Bacon in the books he gave to Cambridge University. It bears his arms, with a hog above, and below the truly Baconian device, Mediocria firma: date 1574. M. Olivier complains that English plates, though numerous, are uninteresting, being mostly heraldic; but this is not true of present-day plates, which are very various in character and often real works of art, embracing not only heraldic but

Returning to our special subject and to M. Olivier, the plates of pharmaciens that he describes or alludes to are those of Bertram of Nîmes; of the more famous Geoffroy (fig. 1), who held high civic office in Paris in 1694, and whose place of business in the Rue Bourg-Thibourg became a noted scientific meeting-place for the most eminent men of his time; of Dumesnil of Caen; of de Roo of Douai (which were primarily labels of an ornate kind for bottles and pomade pots); of Cadet, pharmacien in chief to the army in 1731 (fig. 2), and a few others. The medical book-plates to which he gives most prominence are of great interest to all who in any capacity are connected with the healing art. Special mention must be made of those of Le Cat and Chastanet, famous surgeons of the eighteenth century, who were respectively leaders of two opposing schools. Their plates were designed by equally famous artists, and are in their different styles admirable examples of the art. Le Cat was the inventor of an instrument for breaking the stone, which brought him much reputation, and which, along with other surgical instruments, is represented in his book-plate (fig. 3)—a symbolical one eloquently expounded by M. Henri André (quoted by M. Olivier). It represents Science as a goddess crowned with laurel, and with the wings of the cap of Mercury on her head, traversing land and sea. Unfortunately for Le Cat his instrument was soon afterwards superseded by another, the invention (in 1748) of the friar Côme, which was favoured by Chastanet, in whose bookplate (fig. 4) it figures with other instruments. Another plate of great historical interest reproduced by M. Olivier (fig. 5) is one of those designed for the Royal Academy of Surgery (Paris), founded in 1731. It bears the arms of the old community of Master Surgeons of Paris: d'azur à trois boites couvertes d'argents de la community of Master Surgeons of Paris: d'azur à trois boites couvertes d'argents. posées 2 et 1, accompagnées en abime d'une fleur de lis posée sur une gloire du second. But what is most interest-ing is the legend, Consilioque manuque [mortem arte pellet], and the device underneath, Jam veneris morbus certa est medicabilis arte. M. Olivier, however, raises the question whether this is really an ex-libris at all, and not

rather a bookseller's mark to indicate a work dealing with venereal diseases. He reproduces it as evidence that our forefathers had no need of 606 and other German remedies

M. Olivier describes several German book-plates, and reproduces three, among which is the oldest specimen of the kind in the possession of his Society (fig. 6), that of Dr. Johann Schenck, professor at Jena in 1590. It is more pharmaceutical in character than those we have seen from France. The jars displayed at top and bottom are evidently copied from some chemist's shop. A very beautiful German plate (fig. 7) is that of Gottfried Thomas (c. 1590), which shows the owner seated in the open air reading a book, with a rosary in his hand, another open book at his feet, and a picturesque landscape behind him. Another of the German plates described (but not reproduced) is of the eighteenth century; in it are shown several surgical instru-ments, of which M. Olivier says with evident satisfaction that they were not "made in Germany," being inventhat they were not made in Germany, being inventions of Le Dran, Le Cat, Louis, and other French surgeons. Along with these may be named two fine German book-plates of recent date, designed by Joseph Settler, and reproduced in the Journal of the Ex-Libris Society. The more noticeable of the two is that of Ludovic Harrisch, a medical practitioner or chemist (Apotheker). The central figure probably represents Truth. She holds a lighted torch in her right hand and a scroll in her left. Above is the sun in splendour, printed in gold. On either side of the figure are chemical apparatus, flasks, retorts, pestle and mortar, books, etc. The inscription is: "Ex-Libris Ludovici Harnisch Pharmacopolæ Berolini." The other is that of a Dr. Flatau, in which books, MSS., and surgical and chemical appliances are shown on a table. A central column supports an ornamental roof.

Mr. Egerton Castle, in his "English Book Plates" (1892), reproduces some very curious specimens of doctors' plates, of rather sinister significance. That of Samuel Farr, M.D. (1769), is distinctly sepulchral—it shows a tomb with an urn. So, too, with that of A. Broughton, M.D. (1796), which, however, is presumably a memorial of the medicus—an urn under a palm tree, with a python biting his tail, an emblem of his calling and his restful eternity.

We are disappointed by the result of our search for recent pharmacists' plates. Can any of our readers produce any?

New Books.

Jordan, H. W. Reminders for Company Secretaries. Fourth edition. S₃ in. ×5₃ in. Pp. 32. 11d., post free. (Jordan & Sons, Ltd., 116 and 117 Chancery Lane, London, W.C. 2.) [A useful reminder of the statutory duties of secretaries to limited companies.]

Lindley Jones, W. "Mercantile Year Book and Directory of Exporters." Pp. 834. 20s. (Lindley Jones & Brother, 16 St. Helen's Place, London, E.C. 3.) This is the thirty-fourth annual issue, which has been corrected and brought up to date with accustomed care. It contains thirty-two pages more than its predecessors and a large number of names have been added to the list of overseas buyers and their United Kingdom and European agents. The Continental section, which had not been corrected for six years, has had the personal attention of Mr. Lindley Jones, and altogether the present edition will be found a great improvement in every way.

Pitman's Business Man's Encyclopædia and Dictionary of Commerce. Part I. 10½ in. × 7½ in. Pp. 64. 1s. 4d. (Sir Isaac Pitman & Sons, Ltd., 1 Amen Corner, London, E.C. 4.) [This work, intended to be issued in twenty-eight parts, deals with accountancy, banking, office appliances, commercial law, shipping, political economy, and commercial geography, in paragraphs arranged in alphabetical order. Facsimile agreements and other legal documents and maps are features of the encyclopædia. The remarks on adulterants are antiquated, the frauds referred to being those of a century ago.]



"Pears" Revisited.



NE of the short stories of a great French novelist relates how, walking in a public garden, the author came across a

faded old couple, survivors of l'ancien régime, who, it appeared, had a grievance. They were troubled because none of the younger generation knew how a minuet should be danced; and the two, master and mistress of their art, proceeded to show the stranger the correct steps. Similarly, one may suppose, the founder of the House of Pears, if he could return

to earth, would smile with a certain irony at the efforts of some of our present-day manufacturers to produce what an expert lately described in court as "water standing upright." With a difference, however; for the art of soapmaking, as exemplified by A. & F. Pears, Ltd., is much more than a tradition, although tradition has its rightful place in the company's policy.

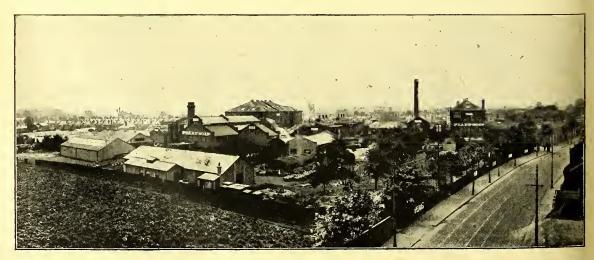
HISTORICAL.

It was in 1789 that Mr. Andrew Pears established his business in Gerrard Street, Soho, which in those days had as residents Edmund Burke and other notabilities. After a time he removed to Wells Street, Oxford Street, where he was joined by his grandson, Mr. Francis Pears, and the style of the firm was changed to A. & F. Pears. A second removal took place in 1846 to Great Russell Street, Bloomsbury; and this shop, adjoining the British Museum, was the headquarters until the present handsome premises at 71-75 New Oxford Street were completed in 1888. The Isleworth factory was started in 1861, close to a house in which Mr. Francis Pears lived; that date, under the initials "F. P.," is still to be seen on a stone let into the wall of the oldest portion of the factory. Conversion into a limited company took place in 1892, the late Mr. Thomas J. Barratt being the first chairman; on his death in 1914, he was succeeded by Lord (then Sir Thomas) Dewar. The mention of Mr. Barratt naturally recalls many of the company's advertising triumphs, with which his name is inseparably connected.

For the blue and red pigs, which, according to a legend, used to sally forth from the Wells Street premises and stroll up and down the adjoining thoroughfares carrying their message of aids to beauty, he was not responsible; but during the 'seventies appeared the complementary colour announcement which Mr. Barratt, in an interview (C. & D., II., 1889, p. 112), selected as having attracted the most attention of any of the series in 'proportion to its cost. "You Dirty Boy," Focardi's marble group purchased in 1878 for 500l., ultimately repaid the original outlay upon it by means of the sale of terra-cotta and other copies, and incidentally added to the gaiety of nations by suggesting political caricatures. "Bubbles," acquired from the artist, the late Sir John Millais, for 2,200l., captured the popular fancy, perhaps, more immediately than either "You Dirty Boy" or Furniss's cartoon now known as "Dirty Dick," a sketch of a tramp writing the famous testimonial ending, "Since then I have used no other." The last-named was first used by Messrs. Pears in 1892, and originated in a skit on an older advertisement bearing a picture of Miss Mary Anderson seated at a table with a newly written testimonial in her hand. Another remarkable coup made by the firm about this time was the circulation of 250,000 French "pennies," stamped with the words "Pears' Soap." These were supplied to 'bus conductors and others at fourteen for a shilling. The 'bus companies soon refused to take them, and eventually the matter was raised in the House of Commons, and an Act was passed calling in these and other French coins in circulation. The French authorities, however, refused to receive back the coins bearing the advertisement, and these had to be melted down by-the British Government.

RECENT PROGRESS.

In the course of the interview to which we have just referred, Mr. Barratt estimated the firm's advertising bill for that year at about 120,000%. This was considered so remarkable a sum that at least one trade journal had a leading article on the subject; and a later scribe might well have ended the romantic history with the words, "And they lived happy ever after." But this comfortable terminus ad quem has been converted by Messrs. Pears into a terminus a quo: in other words, their record



VIEW OF THE ISLEWORTH WORKS.

since the days which we have just recalled is one of steady development. The remarkable thing, as we learned in the course of a recent call at the New Oxford Street offices, is that this expansion, far from coming to a stop on the outbreak of the great war, has continued more rapidly than before. There are now, in fact, several times as many customers in the company's books as there were in 1913.

DEVELOPMENTS IN POLICY.

This progress, so remarkable that its exact causes may well puzzle future historians, has been indicated by some salient features. First among these we are inclined to place the expansion of the "Golden Series." Then there is the price-protection scheme, inaugurated in 1915. Next—and in this, also, the home trade has been studied—we have been struck by the originality of the décor of the windows at the New Oxford Street offices, which not only attract the passing public, but also embody new ideas in window-dressing for the retailer to imitate or adapt. The British coronation regalia display and the garden with pear-trees, for example, show the art of suggestion in the window at its best; and the purpleand-gold showcards now used throughout are strikingly effective and salesmanlike. And, last among the features that we have selected, comes the purposeful and cumulative advertising, in which co-operation with the trader, and especially with the pharmacist, is steadily kept in



ENTRANCE HALL, 71-75 NEW OXFORD STREET.

view. Messrs. Pears have sometimes, indeed, gone out of their way to link the pharmacist with their products in their advertisements.

THE LONDON OFFICES.

Anyone who remembers the famous entrance-hall with its bath and statues, as described by us twenty-two years ago (*U. & D.*, II., 1888, p. 874), must experience a slight shock on entering the New Oxford Street premises of to-day. One wall is covered with artistically lighted show-cases, and part of the hall has been transferred into an office. Luckily, the building is so spacious that several changes of this kind can be made with a minimum of difficulty; and Mr. W. E. Booth, the director who supervises the offices, showed us during our visit more than one example of the supersession of stores by desks, type-writers, and telephones. The clerical staff has much increased of late, and it is well cared for, a large room being provided for social functions (including dances), and a canteen being available on the premises. The C. & D. representative's attention was drawn to a pile of magazines in the social room, these magazines being circulated at the request of the staff, who, it appears, like to study the company's advertisements. These are set up, before they are finally passed, in a miniature printing

department, so that those responsible may more accurately judge of their effect. By a new system of filing that was being introduced when we called, replies to telephone inquiries will, it is believed, be effected without the once inevitable delay in searching—a gain that those at both ends of the wire will appreciate. The company's house-organ, "Bubbles," was noticed in a recent issue of the C. & D. (May 29, p. 49); but we may repeat that it is an exceptionally clever and well-printed publication. There is a stock of soaps and the company's other products at the back of the premises which looks very imposing-till the visitor has been taken to the Isleworth

THE ISLEWORTH WORKS.

The process of soap-making on a big scale is, no doubt, tolerably familiar to our readers; none the less, as we saw it under the genial guidance of Mr. Robert Pears, the director in charge of the works, it was very impressive. Let us outline the life-story of the sevenpenny tablet, from its crude condition in an iron cauldron (and there are several) big enough to contain the Council of the Pharmaceutical Society, to its exit from the factory in the distinctive three-tablet box. Up to the time when it leaves the drying-machine—an uncannily perfect piece of mechanism-by a sort of overhead railway, the soap, like Mark Twain's frog, may not appear to the casual eye to have more "p'ints" about it than any other soap. But it then goes into alcoholic solution, and, this effected, flows out from pipes into tall containers, dexterously handled by men with thick gloves. After cooling, each of the long bars is cut into tablets by machines; and next follows the tedious part of the process. The tablets, not yet transparent, go on trays into the drying chambers. Air is forced over the soap so as to remove almost all the remaining alcohol—which, of course, is recovered; and then the trays go into a very large chamber in which they are stacked for several months. By the time they are removed, Nature has done her share of the process by rendering the soap dry, transparent, and concave on opposite sides. Stamping and finishing follow, and finally the tablets are packed in boxes turned out—as are nearly all the boxes used—in the company's own "box shop. Messrs. Pears have had the new 12-tablet containers tested by a severe "gruelling"—almost every species of violence short of dropping them from an aeroplane—and are satisfied that breakage of the soap in transit is now practically impossible.

MANY PERFUMES.

The opaque soaps have a corner of the premises to themselves, and the more expensive types of soap, including the famous balls, are made in the older portion of the factory, across the road. Nature, which, as we have seen, lends such good assistance in maturing the unscented tablets, appears to have a grudge against the balls: they dry unevenly, and have to be reshaped by hand. In the same building is the powder department, where we saw machinery turning out toilet powders on a large scale. Here, too, are the perfume vaults-a sanctum sanctorum containing ingenious apparatus for blending and storing the odours which eventually find their way all over the world. Reckoning, as we passed a "park" of winchesters of essential oil, that they were worth about 50l, apiece, we thought of Marlowe's "infinite riches in a little room," and began to understand why the air of Isleworth is fragrant.

THE SOCIAL SIDE.

Ending our visit at the canteen, we were able to appreciate the spacious proportions of the adjoining hall, devoted to concerts and other social gatherings. Close by lay an immense tank destined for the storage of spirit, and here and there we found builders at work extending certain departments. The staff, numbering about 1,000, is well organised in the matter of games, Pears' Athletic Club being, we understand, a flourishing society. The motte printed on the first page of the company's house. motto printed on the first page of the company's house-organ, "Pull together," aprly sums up the impression we gained of cordial relations between the directors and the staff-relations in which the foundations of future progress are well and truly laid.



Statistics of Poisonings in Scotland, 1868–1917.



The recent issue of the sixty-fourth annual report of the Registrar-General for Scotland, covering the year 1918, renders possible a review of the cases of fatal poisoning in Scotland recorded since the passing of the Pharmacy Act, 1868. We have already made a similar review in the case of England and Wales (C. & D., 1918, p. 1914); the Scottish figures for the year 1918 were given in our issue of May 29 (p. 52), and may be glanced at in connection with this record of the preceding half-century.

In view of the sparseness of the population of Scotland

In view of the sparseness of the population of Scotland fifty years or more ago, it is not surprising that the early history of the sale of poisons in that country is fragmentary. In 1827, Mary Smith, the wife of a farmer residing at Denside, Forfarshire, was tried for murder by poisoning, and in the course of the evidence it appeared that she had applied to a surgeon of her acquaintance for ratpoison. The surgeon had supplied arsenic, which he had obtained from an apothecary (i.e., a chemist and druggist), and had marked it "Arsenic, Poison." Thirty years later, at the trial of the notorious Madeline Smith, it appeared that the formalities of the Arsenic Act, 1851, had been duly complied with in purchases ascertained to have been

The three charts given opposite are planned in the same way as those that we gave in 1918 for England and Wales. In both sets of charts, the figures from 1868 to 1881 inclusive must be taken to some extent on trust-in the case of Scotland because, although the annual reports for those years distinguished between suicidal poisonings and poisonings due to negligence or accident, no details of the latter class were given. From 1882 onwards a more exact comparison is possible, the figures (as is our practice) being corrected so as to exclude deaths due to coal-gas, insect-stings, poisonous plants, and so forth. During this period the total death-rate for Scotland has been approximately the same as that for England and Wales-in 1882, 19.35 and 18.8 respectively; in 1913, 15.45 and 13.5 respectively. On comparing our two sets of charts, it will be seen that they present some interesting points of difference. Chart 3, for instance, shows that in Scotland the total death-rate from poisoning has, during the fifty years, never exceeded 22 per million of population, while in England and Wales it has been as high as 29. A more striking difference is that the position on this chart of the "accident" and "suicide" lines is the reverse of that on the English chart; and, on taking a rough average, it appears that there are about as many accidental poisoning deaths in proportion in Scotland as there are suicidal poisoning deaths in England and Wales, and vice versa. The other two charts further illustrate the difference between the two parts of Great Britain both in the total suicide rate and in the ratio of poison suicides to total suicides, the Scottish figures for both being, roughly, two-thirds of those for England and Wales. In both sets of tables there is a marked drop in the total poison deathrate since the year 1914.

Turning to the figures for each of the poisons tabled, we have to make as just a comparison as we can with the figures for England and Wales, bearing in mind the difference in the two populations and in their distribution. Throughout the period 1868-1917 the population of Scotland has been, year by year, approximately a seventh of that of England and Wales. To consider what bearing different conditions of living in the two parts of Great Britain may have on the use of poisons is beyond our province; we must perforce be guided by ordinary arithmetic. On this basis the subjoined tables of ten poisons most frequently appearing in the Scottish records, compared with the same poisons in the corresponding records for England and Wales, is instructive. From 1882 to 1916

fatal accidents with opium and its preparations were about twice as numerous in proportion in Scotland as in England and Wales; with carbolic acid, phosphorus,

| Poison | Sce | otland | England and Wales | | |
|---------------------------|-------|--|---|---|--|
| (Negligence and Accident) | 1917 | Average, 1882–1916 | 1917 | Average, 1882-1916 | |
| Ammonia | 1 3 - | 1 · 5 0 · 8 5 · 1 1 · 2 1 · 1 21 · 5 0 · 9 1 · 4 1 · 45 0 · 9 | 5 4 9 - 3 16 6 - 2 2 | 9·7 6·34 25·0 7·4 10·9 73·9 6·0 6·2 6·43 3·7 | |

| Poison | Sec | otland | England and Wales | | |
|-----------------|--|---|---|---|--|
| (Suicide) | 1917 | Average, 1882-1916 | 1917 | Average, 1882–1916 | |
| Ammonia Arseuic | $-\frac{3}{3}$ $\frac{1}{1}$ $\frac{2}{1}$ $\frac{1}{1}$ | 0.35° 0.5 3.7 0.33 1.3 8.2 1.2 0.6 0.4 0.8 | 11 2 32 26 12 4 26 25 7 | 9·8 5·5 97·6 43·5 25·9 52·8 53·7 22·3 1·2 21·9 | |

strychnine, and sulphuric acid, about one and a-half times as numerous; and with ammonia and chloral, slightly more than equal. In the suicide table the figures for opium and its preparations come out just above those for England and Wales; those for the other poisons are much below. In studying these tables it should be borne in mind that fewer of the less-known poisons cause fatalities in Scotland than in England and Wales; thus, taking a year at random—the year 1900—we find that the English list comprises forty-one poisons and the Scotlish fifteen, in addition to "kind not stated." In 1899, out of a total of seventy-four negligence and accident poisonings in Scotland, nine are "kind not stated," and fifty-one are accounted for by aconite, ammonia, carbolic acid, opium (thirty-three), and phosphorus; and in 1907, out of a total of sixty-nine, two are "kind not stated," fifty-four are accounted for by A.B.C. liniment, ammonia, carbolic acid, chloroform, opium (thirty-two), and strychnine. Two specimen years taken from the suicide records yield somewhat similar results. In 1888, out of a total of thirty-three suicidal poisonings, five are "kind not stated" and twenty-one are accounted for by opium (sixteen) and carbolic acid; and in 1910, out of a total of twenty-eight, four are "kind not stated" and eighteen are accounted for by opium (eight), carbolic acid, and oxalic acid. The ratio of the "kind not stated" figures

to the totals is practically the same in Scotland as in England and Wales, and similarly precludes full analysis of the Registrar-General's reports. Three outstanding features, however, may be mentioned by way of summary. Suicide in Scotland by poison is relatively infrequent;

opium in some form is (or was up to the commencement of the Great War) by far the most-used poison; and the statistics of suicide by carbolic acid show no such sensational rise as that which took place in England and Wales in the 'nineties.

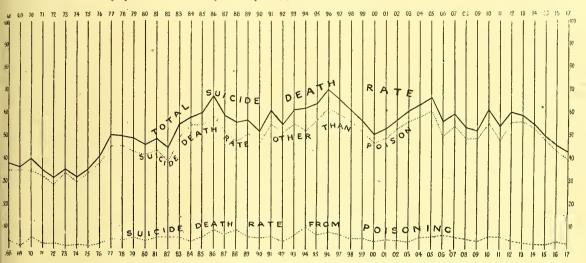


CHART 1 .- SUICIDE DEATH RATES PER 1,000,000 OF POPULATION (SCOTLAND) FROM 1868 TO 1917.

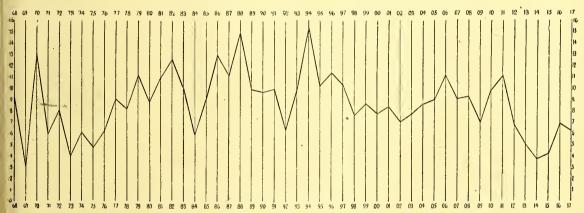


CHART 2 .- PERCENTAGE OF SUICIDES BY POISON TO TOTAL SUICIDES (SCOTLAND) FROM 1868 TO 1917.

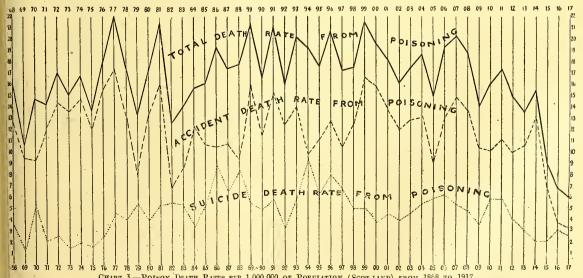


CHART 3 .- POISON DEATH RATES PER 1,000,000 OF POPULATION (SCOT LAND) FROM 1868 TO 1917.



Provision of Medical and Allied Services.



We dealt in the C. & D., June 5, p. 78, with that part of the interim report of the Consultative Council on Medical and Allied Services of the Ministry of Health which referred directly to pharmaceutical services. We now summarise the whole report so that it can be seen how the pharmaceutical services will need to be carefully considered in their relation to the other provisions for the treatment and prevention of disease.

The first section deals with the general principles. It begins by quoting the reference to the Consultative Council on its appointment in October 1919.

To consider and make recommendations as to the scheme or schemes requisite for the systematised provision of such forms of medical and allied services as should in the opinion of the Council be available for the inhabitants of a given area.

The changes advised are rendered necessary because the organisation of medicine has become insufficient, and because it fails to bring the advantages of medical knowledge adequately within reach of the people. This insufficiency of organisation has become more apparent with the growth of knowledge, and with the increasing conviction that the best means of maintaining health and curing disease should be made available to all citizens.

The general availability of medical services can only be effected by new and extended organisation, distributed according to the needs of the community. This organisation is needed on grounds of efficiency and cost, and is necessary alike in the interest of the public and of the medical profession. Measures for dealing with health and disease become, with increasing knowledge, more complex, and, therefore, less within the power of the individual to provide, but rather require combined efforts. Such combined efforts to yield the best results must be located in the same institution. As complexity and cost of treatment increase, the number of people who can afford to pay for a full range of services diminishes. Moreover, enlightened public opinion is appreciating the fact that the home does not always offer the best hygienic conditions for dealing with serious illness, which requires special provision in order to give the patient a full chance of recovery.

In days gone by such conditions as appendicitis were treated with poultices and drugs in the patient's home. Now they are treated by operation, which is more effective, but requires more equipment, a team of workers, and a larger expenditure. Such conditions as diseases of the lungs formerly received clinical examination and treatment by drugs. They may now require, in addition, the attention of the pathologist and the radiologist. This means greater efficiency, but more organisation and higher cost.

Preventive and curative medicine cannot be separated on any sound principle, and in any scheme of medical services must be brought together in close co-ordination. They must likewise be both brought within the sphere of the general practitioner, whose duties should embrace the work of communal as well as individual medicine. It appears that the present trend of the public health service towards the inclusion of certain special branches of curative work is tending to deprive both the medical student and the practitioner of the experience they need in these directions.

Any scheme of services must be available for all classes of the community, under conditions to be hereafter determined. In using the word "available," we do not mean that the services are to be free; we exclude for the moment the question how they are to be paid for.

Any scheme must further be such that it can grow and expand, and be adapted to varying local conditions. It must be capable of comprising all those medical services necessary to the health of the people.

The services may be classified into: (1) Those which are domiciliary as distinct from those which are institutional. (2) Those which are individual as distinct from those

which are communal.

We begin with the home, and the services, preventive and curative, which revolve round it—viz., those of the doctor, dentist, pharmacist, nurse, midwife, and health visitor. These we style domiciliary services, and they constitute the periphery of the scheme, the remainder of which is mainly institutional in character. A health centre is an institution wherein are brought together various medical services, preventive and curative, so as to form one organisation. Health centres may be either primary or secondary, the former denoting a more simple, and the latter a more specialised service.

The domiciliary services of a given district would be based on a primary health centre—an institution equipped for services of curative and preventive medicine to be conducted by the general practitioners of that district, in conjunction with an efficient nursing service and with the aid of visiting consultants and specialists. Primary health centres would vary in their size and complexity according to local needs, and as to their situation in town or country, but they would for the most part be staffed by the general practitioners of their district, the patients retaining the services of their own doctors.

A group of primary health centres should in turn be based on a secondary health centre. Here cases of difficulty, or cases requiring special treatment, would be referred from primary centres, whether the latter were situated in the town itself or in the country round. The equipment of the secondary centres would be more extensive, and the medical personnel more specialised. Patients entering a secondary health centre would pass from the hands of their own doctors under the care of the medical staff of that centre. Whereas a primary health centre would be mainly staffed by general practitioners, a secondary health centre would be mainly staffed by consultants and specialists. It would be a consultant service in function and would be carried out by specialists or by general practitioners acting in a consulting capacity.

Secondary health centres must of necessity be situated in towns, where alone an efficient consultant service and adequate equipment could be expected, and the necessary means of communication exist. The selection of these towns will need careful consideration, and full information will be required as to the extent of existing provision of hospital and allied facilities, and of its distribution in relation to population and means of public conveyance. In rural areas the natural currents of traffic and business and existing medical facilities will usually indicate the town or towns in which a secondary health centre may best be placed. In this connection we would like to point out the importance of carrying out a "hospital survey" at an early date. The results of this survey would afford data for recognising the areas in which the existing provision is inadequate, and the degree of the inadequacy. The secondary health centres would vary in size and elaboration according to circumstances.

Secondary health centres should in turn be brought into relation with a teaching hospital having a medical school. This is desirable, first in the interest of the individual patient, that in difficult cases he may have the advantages of the highest skill available, and secondly

in the interest of the medical men attached to the primary and secondary centres, that they may have the opportunity to follow the later stages of an illness in which they have been concerned at the beginning, to make themselves acquainted with the treatment adopted, and to appreciate the needs of a patient after his return to his home. In those towns where teaching hospitals exist, secondary health centres would sometimes be merged in them.

Supplementary Services.—Certain supplementary services would be a necessary part of the scheme. They would be in relation to both primary and secondary health centres, would often serve a wide area, and would require special staffs. They would comprise provision for patients suffering from such conditions as tuberculosis, mental diseases, epilepsy, certain infectious diseases, and for those in need of orthopædic treatment.

diseases, and for those in need of orthopædic treatment.

Then follows the diagram which is reproduced here (in the original, colours and other details are introduced) and also particulars of a scheme devised by Dr. J. Middleton Martin, Medical Officer of Health for Gloucestershire, which is at present in operation.

Underlying the recommendations of the Consultative Council is the dominant purpose of providing the best services for the health of the people. The recommendations are designed to secure: (1) Provision of buildings and equipment. (2) Services suitably correlated and available for all. (3) Opportunity for the best work and the furtherance of knowledge. (4) Co-ordination of preventive and curative medicine. (5) Freedom of action for doctor and patient. Under existing conditions doctors

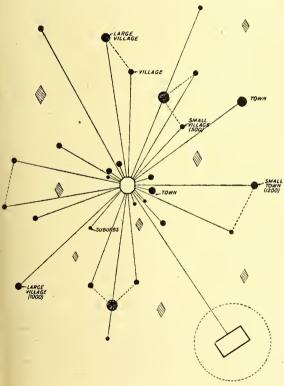


DIAGRAM OF AN AREA SHOWING ALL SERVICES.

The rectangle within a dotted circle (on right) indicates a teaching hospital with medical school; the octagon in the centre a secondary health centre; the black circles, primary health centres; and the diamond-shaped figures. supplementary services. Domiciliary services are not shown in the diagram, but operate near the black circles.

are frequently without such provision or opportunity; they have imperfect access to such resources as those of bacteriology, biochemistry, radiology, electrotherapeutics; and they have inadequate means of assistance from consultants or specialists. Consequently they cannot always

do justice to their patients or themselves. The scheme of services outlined may on superficial reflection be deemed by some people to be so ambitious as to be impracticable. The Council are well aware that the realisation must be slow and, from the difficulty of adapting existing institutions and methods, may be imperfect. Apart from the lack of material equipment, trained personnel in adequate numbers is not at present available, though the acceptance and approval of this scheme by the profession and the public should give the educational stimulus to its production. To construct any part well, and to avoid mistakes in local effort, the whole design must be before the mind. This is an undertaking which can be at once begun and steadily proceeded with, and at a rate proportional to the enlightenment and determination of local public opinion—lay and medical. Any effort, however small and localised, can confer benefit, if it be designed in relation to the scheme as a whole. A primary health centre, with its organised services established by local enterprise, will serve its community well if it is conceived in the right spirit, put up in the right place, and organised on the right lines.

DOMICILIARY SERVICE.

Section II. deals with domiciliary service, which is the first element in any scheme of systematised medical services. It comprises the services of doctor, pharmacist, nurse, midwife, and health visitor. In regard to doctors, it is recommended that the custom whereby each practitioner has his consulting-rooms at his own house should continue, except where it may be necessary for the Health Authority to provide other accommodation, such as collective surgeries. Preventive medicine in individual cases should form part of the duties of the general practitioner, but medical expert advice would also be required in a large variety of other conditions having a direct bearing on the health of the people.

Pharmacy is dealt with in the first of the two paragraphs which were printed in the C. & D., June 5, p. 78, while the questions of nursing and midwives are to be

referred to special committees.

Dental services should be partly domiciliary and partly institutional. Domiciliary treatment would usually be carried out at the dentist's own surgery, but occasionally at the patient's home. It would be sought by the patient either on his own initiative or on the advice of a doctor. Dental treatment should, where necessary, be carried out in co-operation with medical treatment. Whether a patient should attend at the dentist's surgery or at a health centre would, no doubt, be determined by the mutual convenience of the patient and dentist, the accessibility of the centre, and other local conditions.

PRIMARY HEALTH CENTRES.

These are dealt with in Section III. In the primary health centres would be gathered together the health services and activities of the district they served. The distinguishing feature of these primary health centres, in contradistinction to secondary health centres, would be that they would be staffed by general practitioners.

custinguisning feature of these primary health centres, in contradistinction to secondary health centres, would be that they would be staffed by general practitioners.

There would be wards of varying sizes, and for varying purposes, including provision for midwifery. The increasing employment of open-air treatment of illness would be provided for. Clinics would be equipped where doctors could see their patients and consult with each other. Further accommodation might include the following: Operating room, with the necessary equipment; radiography rooms; laboratory for simple investigations; dispensary; baths, including simple hydrotherapy; equipment needed for massage, electricity, physical culture; a public mortuary; a common room, which would serve as a meeting-place for the general practitioners of the district, and to store clinical records on an agreed and standardised basis.

The services dealt with are: (1) Communal—i.e., prenatal care, child welfare, medical inspection and treatment of school children, physical culture, examination of suspected cases of tuberculosis and occupational diseases, etc. (2) Dental services, a dental clinic either on partime or whole-time basis. (3) Pharmacy, upon which a further report is promised (see C. & D., June 5, p. 78).

(4) Ambulance service, which besides conveying the sick, would organise motor transport that could be used in sparsely populated districts to serve as travelling clinics.

Primary centres are an essential part of an efficient general practitioner service, and would be required in

both rural districts and towns.

Dealing with the personnel, it is considered that the standard of professional efficiency would be raised by the establishment of these centres. Whole-time salaried service is decided against, as it would not ensure "the best endeavour" and would tend by its machinery to discourage initiative, to diminish the sense of responsibility and to "encourage mediocrity."

SECONDARY HEALTH CENTRES.

These are dealt with in Section IV., the services being mainly of a consultative type. A secondary health service should be completely equipped and include:

General Services .- Medical, surgical.

Special Services.—Obstetric, gynæcological, ophthalmological, throat and ear, dermatological, orthopædic, genito-urinary, dental, and industrial hygiene.

Laboratories.—Pathology in all its branches.

Other Services.—Pharmacy, radiology, electrotherapy, hydrotherapy, radiant heat, physical culture, massage,

nursing.

It is advocated that Poor-Law infirmaries should be transferred from the Guardians to the health authority, so as to form the nucleus of the curative services of secondary health centres. The qualifications and payment of consultants are dealt with, and it is recommended that standard charges should be made in the public wards either by means of insurance or by direct payment.

SUPPLEMENTARY SERVICES.

These are dealt with in Section V., and include sanatoria for tuberculosis, recuperative centres (convalescent centres), hospitals for curable or incurable mental disease, institutions for the feeble-minded, epileptic colonies, orthopædic centres, and hospitals for certain infectious diseases.

It is this section which deals with teaching hospitals with medical schools, voluntary hospitals, research, standardised clinical records, and administration.

LABORATORY SERVICES.

Section VI. dcals with certain forms of provided services such as (a) laboratory service, (b) dental services, (c) maternity and child-welfare services, (d) physical culture, and (e) recuperative centres. This section contains the details of laboratory services in which it is suggested that pharmacists might be employed (C. & D., June 12, p. 61). The laboratory services section is divided into primary centres, secondary centres, university centres, and research. It is in the primary centres that pharmacists might be employed. The scope of the work is indicated as follows:

At each primary centre would be a laboratory of which the first and essential function would be to give facilities to the general practitioner himself. It would be so equipped as to enable him to make personally any examinations which fell within his scope and desires. equipment, which would be supplied from the secondary centre, would have to keep pace with any increase in knowledge, skill, and interest that might be displayed by

the practitioners concerned.

It is clear that some assistant would in all cases have to be in charge of such a laboratory, but the nature of his qualifications might vary with the size, geographical situation, and special needs of the centre. At the smallest centres the part-time services of a moderately skilled attendant might be sufficient. At larger centres assistants with more training would be provided, and it is a matter for consideration whether, in certain cases at any rate, such individuals might not combine the duties of the pharmacist with those of the laboratory assistant. the largest primary centres two assistants might be required, and it would be desirable that the senior of these-especially at centres farthest removed from a

secondary centre-should be able to report, at least provisionally, in cases of urgency; as, for instance, when diphtheria is suspected.

It would be well if those who work at the primary centres were, as a matter of routine, to spend occasional periods at the laboratory of the secondary centre for the improvement of their skill and knowledge.

DENTAL SERVICES.

The paragraphs referring to dental services are as

It is necessary that the schemes devised for making dental treatment available for all classes of the community should be closely co-ordinated with the general plan of medical services—curative and preventive—and form part of the whole. The tendency is for treatment of the mouth and teeth to become more preventive in character, but all forms of dental treatment, even when definitely curative, constitute in the strict meaning of the

term a branch of preventive medicine.

The object of dental treatment is to procure normal formation of the jaws and dental arches, and a clean and healthy mouth at all ages. It is obvious that most of the impediments to attaining this end are to be sought either in conditions governing pre-natal growth, or in the environment of early childhood. On the other hand, the ill-effects of dental disease and oral sepsis throughout life are well recognised. Dental treatment, therefore, comes into close relation with medical treatment at all periods.

A dental clinic staffed by one or more visiting dental surgeons should form part of every primary health centre. The work of this clinic would consist of all forms of ordinary treatment of expectant and nursing mothers, young children under school age, school children, and the ordinary adult population. Artificial dentures would be fitted. The dental surgeons would have opportunities of giving instruction in the elementary principles of oral hygiene. The institution of these primary health centres would be the means of overcoming many of the difficulties which have hitherto stood in the way of the provision of dental treatment for school children in rural districts. A nursing service in connection with dentistry should be attached to each centre.

At secondary health centres there would be similar dental clinics to meet the requirements of the immediate neighbourhood, but on a larger scale, especially as regards the fitting of artificial dentures. For this purpose, which in the case of any patient is only an occasional want, there is not the same need to provide treatment near home, as, for example, in the case of children; and in a large town the secondary health centre would absorb most of the artificial denture work otherwise carried out in the more remote primary health centres. At each dental clinic in a secondary health centre there should be an orthodontic department.

A dental laboratory would be attached to each dental clinic at a secondary health centre, in which all prosthetic and orthodontic and some surgical appliances would be

made for the area served by the centre. The staff of the dental clinic would consist partly of whole-time officers and partly of visiting dental surgeons. together with a staff of nurses and mechanics. Selected members of the dental staff of the health centre would act as consulting dental surgeons at the correlated primary

centres, paying the latter periodic visits.

Intimate co-ordination between the secondary health centre and the primary health centres within its area would be essential.

It is stated that the number of dentists at present on the Dentists Register is not nearly large enough to enable any kind of comprehensive scheme of dental treatment to be put into operation, a fact fully recognised in the Report of the Dentists Act Committee.

The appendix deals with designs for health centres, plans of three types of primary health centres being

given.

The report (Cmd. 693) can be obtained from the Stationery Office, Imperial House, Kingsway, London, W.C. 2, at 1s. net.



The Commerce of Cinchona and Quinine.



In the following article the author gives some new and interesting facts dealing with the inner history of Cinchona and Quinine prior to and during the war.

THE story of the cinchona tree, together with that of the economics of quinine, should prove one of more than ordinary interest just now, not only in view of the momentous part which quinine played in international affairs during the war with Germany, but in view also of the present unprecedented demand for the drug in all parts of the world. The original home of cinchona is, like that of many other famous tropical trees, in South America. There it flourished in its wild state, and thence was carried away in course of time to those parts of the world where it is now treated as a commercial proposition on account of the valuable medicinal properties with which its bark is imbued. In South America itself the cultivation of the tree with a view to the production of quinine would appear to have never been such as to place that country in the front rank of quinine-producing areas, and at no time has the production of cinchona in South America been so great as to have an appreciative influence upon the world's markets for quinine. Certain quantities of fine pharmaceutical bark continue to be exported annually from South America, but these remain a negligible factor in the present situation of the quinine market. That part of the world to which the cinchona tree, as a stranger in a strange land, has taken most kindly is undoubtedly the Netherlands East Indies. That this has to do with the volcanic elements impregnating the soil of these tropical islands may be more or less assumed as a fact. At any rate, it is there that the cinchona tree has been and is still being cultivated, commercially speaking, to its best advantage as regards both the percentage of quinine in the bark and the quantity of bark and quinine annually exported.

CEYLON AND INDIAN BARK.

Meanwhile Ceylon has toyed with cinchona, but does not appear to have ever made a very great success of its production. It is true that some years ago that country experted quite a considerable quantity of bark, but the percentage of quinine contained therein was decidedly lower than that which is contained in the bark produced by the Java plantations, nor has there ever been a time when Ceylon has possessed cinchona trees of the same quinine-bearing capacity as those which are to be found in the Dutch colonies. Eventually the cinchona plantations in Ceylon gave place to tea and rubber, which have proved to be far more profitable enterprises.

In India the situation took a different turn, owing to

In India the situation took a different turn, owing to the interest which the Government of India officially had in the free distribution of quinine among the natives with a view to combating the havoc caused by malaria. There Government plantations were established in course of time, and, in addition, two Government factories erected for the purpose of manufacturing quinine locally. It must be admitted, however, that the Indian cinchona continues to fall short of the tree which is grown in the Netherlands East Indies to the extent that it has not yet attained to the same flourishing condition or the same percentage of quinine in bark, while the total annual production of Indian quinine still remains about 5 per cent. only of the whole world's yearly production, thus showing perhaps that the difficulty in India is either to find suitable areas for plantation or to raise from Indian soil the best specimens of the cinchona tree.

It is with the Netherlands East Indies, therefore, that this article has mainly to deal in this brief history of

cinchona and the situation generally governing the economics of quinine. Even there, however, the cinchona industry (to call it such) has had its ups and downs. Not many years ago, before the great war, conditions generally in the Dutch East Indian cinchona world were in a very muddled and uncertain state. There were, it is true, a considerable number of estates at that time, some large and others small, but they all worked separately from one another, and the want of co-operation between them made it impossible for the trade as a whole to determine whether the industry in Java threatened to be a positive success or otherwise. There was not only the lack of co-operation among the planters, but the system or lines upon which each estate owner worked his separate business had hardly any reference whatsoever to the working of other estates, the result being that the industry in Java, if looked at as a whole, presented a confused appearance.

Large estates appeared to prosper, while the smaller estates seemed barely to pay their way. There were few records of any kind to prove anything, and there were no complete statistics. The price at which the bark was sold was the price, whatever it might be, which the individual producer was able to obtain from the quinine manufacturers. In fact, such was the position generally that not even the sum extent of cinchona-bark producing areas in Java could be gauged with absolute accuracy, while any question as to the economic prosperity or otherwise of any particular estate could only be answered by the planter himself. The result, of course, was that the cinchona industry in Java was in the position of a disunited and unorganised body, having to deal with quinine manufacturers to whom it was open, on account of their superior organisation, to have a natural advantage over the planters. Meanwhile there was always the danger at that particular time of tea becoming the more attractive enterprise, and thus of cinchona estates being uprooted to make way for the planting of tea.

JAVA PLANTERS CO-OPERATE.

Fortunately for the trade in Java, it was at this time that a certain eminent Dutchman, to whose notice the peculiar condition of quinine affairs in Java had been brough took the situation in hand and commenced his activities by convening a meeting of the cinchona planters. In this connection it should be observed that the planters already had an association at Bandoeng, the capital of the Preanger Regencies, the "Preanger Kinabond," but as this was a lifeless body the members of which rarely met, the fact that such an association existed little affects the truth of the statement advanced above, that the planters were without co-operation up to the time of the meeting which was held at the Batavia Exchange on August 16, 1910. The result of that meeting was so far successful as to bring about a definite change for the better, inasmuch as a proposal for the foundation of a real live association was unanimously adopted and a committee appointed to draw up a memorandum of association and obtain Government recognition. Shortly afterwards, Mr. Abrahamson, the well-known authority on cinchona and quinine matters, now managing director of the British Quinine Corporation and the Association of Quinine Manufacturers in Allied Countries, was appointed chief of the Cinchona Bureau and given an office in the Department of Agriculture, Commerce and

Industry. The planters' interests, now placed in his charge, underwent a thorough and complete transformation, to the advantage of all concerned. Accurate statistics were drawn up, and the whole position analysed in detail. As a result, Mr. Abrahamson was very shortly in a position to advise the Committee as to the aggregate extent of areas under cultivation, the total amount of bark production, the economic position of the various estates, as well as particulars relating to sales and exports of quinine in bark. The eventual outcome of the information thus obtained and laid before the Committee, added to the thorough revision of the whole quinine situation which was then taking place both in Java and Amsterdam, at the same time naturally lcd up to the planters having for the first time a controlling influence in the fixing of prices for the drug.

Meanwhile, as stated, until the outbreak of the European war all the world's quinine manufacturers were organised to a greater or less extent. The only factories not included in any organisation were the two Government factories in India and the factory at Bandoeng, in Java. The principal influence among the manufacturers was Gorman, and notwithstanding everything, this influence was maintained during the early years of the war, although, of course, no factory in any of the Allied countries had any direct dealings with the Germans. It was with this organised body, therefore, that the planters in Java and Sumatra came to negotiate, with a view to having a controlling hand in the regulation of the prices of bark and quinine and the market generally. This object was satisfactorily obtained up to a point by the powerful convention which was formed in July 1913 between the Java and Sumatra cinchona planters and the quinine manufacturers.

THE ALLIES SECURE QUININE.

In 1914 the war with Germany broke out, and incidentally added new lustre to the fame of the cinchona tree. Quinine became a matter of more than commercial importance; in fact, it is scarcely too much to say that the fate of nations depended upon supplies of this alkaloid. As good fortune would have it, however, so far as the United Kingdom was concerned, the crisis which arose at that time provided the occasion of Mr. Abrahamson's return to England, where his unique knowledge and experience of cinchona affairs was subsequently placed at the disposal of all the associated countries stricken with dire need of the drug. Mr. Abrahamson was serving with the Army in France when he was suddenly summoned to London to play the momentous part which he eventually did in securing for the Allied civil populations and their armies in the field practically the whole world's production of quimine. To the trade in Allied countries and in diplomatic circles at home and abroad this is now a matter of common history, though from the Dutch point of view, perhaps, the full story has never yet been related with sufficient justice to all the commercial and economic issues then at stake.

As has already been stated above, the principal influence among the quinine manufacturers was, on the outbreak of war. German, the cause of the maintenance of which was rooted in the convention formed in July 1913 between the Dutch planters and the makers of quinine. It will be easily gathered, therefore, that the way to obtain quinine for the Allied peoples and their armies was distinctly complicated at the outset, in view of Germany's powerful connection with the Dutch and Java Combine. As it happened, however, circumstances favoured the Allied negotiations when, as a result of Mr. Abrahamson's representations to the Foreign Office, the "free" importation of cinchona bark into Holland was no longer allowed, except under consignment to the Netherlands Overseas Trust and in certain limited quantities. This meant, of course, that the Netherlands East Indies, no longer in a position to export the bark to its customary destination, had either to store it in Java or to get rid of it elsewhere—a factor in the new situation which naturally influenced the Dutch in a favourable direction towards the Allied demand. Added to this, the habitual fair-mindedness of the Dutch and Java Combine (who have never been

anything else but desirous of honest play in the matter of tne distribution of Java's production of quinine and bark) was responsible to a large extent for the successful negotiations initiated and carried out in the cause of the Allied peoples. In fact, the Dutch authorities in the Java quinine trade did everything they possibly could to meet the Allied negotiators half-way both as regards price and quantity, and to invest the commercial proceedings with an atmosphere not only of good will on their part, but one of real desire to eliminate all points of difficulty as quickly as they arose.

REASONABLE PRICES FIXED. It was, however, during the negotiations in question that the interests of the planters in Java appeared capable of being abused in the following way. The Associated Governments, under the terms of the agreement made with the Dutch and Java Combine, were entitled to purchase quinine and bark at certain fixed prices. prices were not high considering the then prevalent economic value of the drug. On the contrary, they were singularly reasonable from the Associated Governments' point of view, and the latter have every reason to congratulate themselves on the extremely fair way in which they were treated by the Dutch Combine during the quinine crisis of 1918. The Dutch representatives, however, naturally raised the question at the time as to what measures, if any, were capable of being put into operation to prevent undue speculation in the London market as a result of the comparatively low price at which the quinine would be purchased in the first place. They urged that in the interests of the planters it was only right that something should be done to guarantee that, as regards the sale of an article which, by virtue of Dutch monopoly, ought to benefit in the first instance the producers of the raw material, second-hand prices would be somehow controlled. This was agreed to at the negotiations, and resulted accordingly in Government control of sales of quinine sulphate in the United Kingdom. Government control, therefore, was originally imposed in order to satisfy the planters in Java and to enable the Dutch representatives to go to the planters and say, "We have not sold our entire output as a speculative transaction." Unfortunately the subsequent story of quinine control in this country is inclined to obscure the origin of the whole affair. This was due at the time to ignorance prevailing in official circles concerned with Government supplies of quinine, who, as soon as the war was over, and Government stock sold, appeared to forget that control of sales of quinine sulphate was initiated for reasons rather of foreign commercial policy than those of internal politics, the trade in the United Kingdom being in the first place an export one. This oversight on the part of the Government Departments concerned led to a great deal of confusion and misunderstanding of the position, the worst result being that a considerable amount of undeserved criticism was showered upon the Dutch makers for putting up the price of quinine as soon as the "war' had expired. Meanwhile the total annual quantity of quinine consumed in the United Kingdom is approximately about 5,000 kilos., an infinitesimally small amount compared with the quantities handled by the export trade, and which were freely forthcoming to the trade under a new agreement with the Dutch and Java Combine. It awas also overlooked at the time that the price to which quinine sulphate had risen was by no means commensurate even then with the actual economic value of the drug, the price obtainable in America being considerably higher still. American demand, too, was on a sufficiently large enough scale to attract all the quinine which the Dutch makers were in a position to spare, so that Dutch private resentment at the imputations cast upon them as regulators of the price of quinine was not only justifiable, but capable of being expressed in public to the disadvantage of the British Government, whose ingratitude for past favours, almost in the nature of concession, where quinine was concerned, could have been reasonably argued. Fortunately, however, the Government, realising the delicacy and complicated issues of the situation, though somewhat late in the day, finally decided to remove

"control," and did so to the satisfaction of the trade and the vindication of the Dutch makers' fairness in commercial dealings in the drug. Moreover, just recently the Government has removed the last shreds of official control of quinine sulphate by an Order in Council cancelling the requirement of export licences. Needless to say, in the various passages which took place between the Government and the trade in the United Kingdom on the subject of control before it was actually removed, Mr. Abrahamson played a prominent part defending the Dutch from unfair criticism and elucidating the position generally in the interests of the trade and to the benefit of the British public.

GERMAN INFLUENCE IN JAVA QUININE.

To return to the situation in Java created by the withdrawal for the time being, at any rate, of German influence from the quinine manufacturers. The effect of that withdrawal has undoubtedly been to establish the world-predominance of the Bandoeng quinine factory in Java. Prior to the war, of course, most of the cinchona-bark was shipped to Amsterdam, and there sold by auction, whence a great deal of it passed on to the German factories. The initiation by the Allies of the measures which, during the war, put an end to the "free" importation of cinchona into Holland, naturally, as it was intended to do, eliminated Germany thenceforth as a destination for bark from Java. Exports were curtailed accordingly, and the position generally offered but two alternatives if the industry in Java was not going to suffer very serious consequences. The Dutch had either to find a comparatively new destination for bark exports to take the place of Germany via Amsterdam, or to store the bark in Java. The latter course undoubtedly would have meant a considerable loss, and was never contemplated. On the other hand, the Dutch saw and took the advantage of increasing the capacity of the Bandoeng factory to handle as much bark as possible, with a view rate the major part, of the world's quinine manufacturing industry. Whether the German influence among the quinine manufacturers had anything directly to do with helping the Bandoeng factory to this end, or what they expected to gain therefrom, are questions not easy to answer, but as the German influence continued in spite of the war it can only be supposed that it was aware of the policy which the Bandoeng factory was and is developing still, and perhaps at the time encouraged it for reasons based upon the vague hope that further multiple appropriate the control of the policy was a supposed. quinine supplies would then stand more chance of finding their way somehow or other into Germany. In any case, the fact remains that the German manufacturers did in one way or another play into the hands of the Bandoeng factory, whose predominance in the quinine-manufacturing industry is now assured.

An Old-World Pharmacy.

Discovered in an English village during an autumn holiday. By A. E. Bailey.

In the autumn I visited a village in the Home Counties, famous throughout two continents for its historic associations. I spent an hour in the church, old and grey, like the genial sexton who acted as my guide. After I left him a narrow lane winding past green lawns and bordered by rook-inhabited elms brought me again to the sunlit village street. There I discovered an ancient shop kept by a venerable dame, with whom I had an interesting conversation. Her shop was clean and large, and well fitted in the style of a bygone period. It was a general store, but her stock was low, and trade was evidently dull. I was interested to find in a small recess behind a side counter a collection of bottles and pots whose appearance seemed familiar. Permission to examine these was readily granted when I told the old lady that I was a chemist. Her age, she said, was eighty-three, and her husband and she had acquired the business fifty-three years before.

previous owner had been in possession for over fifty years, and had retired to grow roses with the modest fortune he had made there. He was the village apothecary, as well as grocer, spice merchant, and general dealer. The old lady told me that when her husband purchased the business there were many bottles on the shelves, of the uses or the value of whose contents. they both of them were entirely ignorant. The old man had enjoyed a wide reputation as a "medicineman." The villagers called him "doctor," and he was able to provide a remedy for all the ailments of the countryside. He was evidently one of the old-fashioned type of chemists who flourished before the 1868 days. When the business changed hands the drug-bottles had been packed into a corner, and there they had remained. Some had been broken, some had been requisitioned for other purposes, and many, I think, must have been acquired by enterprising visitors. It was only the remnant which had survived the storms of fifty-three years, and this I examined behind the old lady's counter. The pharmaceutical section of the business was contained in four shelves in a corner, with a nest of small mahogany drawers underneath. Gold labels, faded almost beyond recognition, embellished the drawer fronts. The few I could decipher were old drug names, such as "Pimen.," 'Junip.," and "Althea." They contained, among other things, a few cloves, some orris-root, stick ginger, and tintacks. On the shelves were displayed a number of bottles; one pint-bottle was half-full of what had been "Tr. Benz. Co." fifty years previously, and which had matured unmolested through the intervening years. Several empty bottles bore the labels of historic houses, with addresses in City streets, whose names alone are reminders of the ancient spice and pepper trades. There reminders of the ancient spice and pepper trades. Incre was a rose-pink ointment-jar, very dusty, with a faded gold-scroll label, "Ung Galen," but only half a lid, a hand-made bottle, with a long neck, labelled "Tinc. Arnic.," the dust of ages on its shoulders and an inch of mud inside it, several oil-bottles, mostly cracked, with lips, a jovial old black tun-bellied flagon, a square canister, containing broken leaves and twigs, which I could not recognise, and another with stick cinnamon. There were also a small green and black metal mortar without a pestle, an old wooden measure, which might have been a quassia-cup, and a glass scale-pan with a faded green tassel attached. All these made a brave show on the shelves in the little recess, and the whole had the appearance of an altar dedicated to the Goddess of Pharmacy. It was pathetic to think of this pharmaceutical shrine existing for fifty years after the old proprietor had left it, while the new owner grew old beside it in her turn. She had had her experiences, she had buried two husbands, but still plodded cheerfully on at eighty-three. A married daughter lived with her and helped her in the shop, but "Ichabod" was written over the door thereof, for the motors of the multiple shops have sounded the knell of the village general store. There were also some new bottles on the shelves, containing sweet spirit of nitre, essence of peppermint, and paregoric, which she was careful to tell me was the kind she could legally sell. There were also packets of Epsom salts and penny boxes of ointment. When I had finished my survey she took me into her garden at the back, which had not undergone much change since the old chemist's time. Sage and thyme and rosemary were there, and in the middle of a grass plot there was a large bush of lavender, while a fire-yellow rose covered the back of the house with bloom, and in the corner of the garden I found an ornamental rockery made of pieces of quartz and marble, stone and flints, and crowned by an old stone mortar having a hole in the bettom of it, and from which a lusty creeping-jenny plant meandered over the heap of stones. Thus I spent a very interesting afternoon, and forgot for a time the worries of price-protection and Insurance dispensing. I know not who he was, that old chemist, but I suppose he was one of the tradesmen who laid the foundations upon which we present-day pharmacists build, and, as such. I feel he deserves at least the tribute of a passing thought.



Imports of Fine Chemicals.

January-May, 1920.



June 26, 1920

In view of the fact that there are now no restrictions on the importations of pharmaceutical chemicals it is of interest to note to what extent these are being brought into the United Kingdom from the Continent and the United States, since the import prohibitions were temporarily suspended. We have, therefore, compiled the list given below from the London Customs Bill of Entry, which gives a fairly accurate estimate of the amount of business done in pharmaceutical chemicals, and particularly with Germany, from January 1 to May 31. The list would have much more value if the specific weight or net quantity was declared, but the Bill of Entry, in most instances, gives values only, which, under present inflated conditions, affords little clue to the quantity. According to the list, the value of the pharmaceutical chemicals received direct

from Germany during the period named is about 100,000l., but the amount is probably nearer 150,000l., as many chemicals are entered as "unrated." Moreover, a goodly proportion of the imports from Holland, and to a less extent from Switzerland, emanated in the first instance from Germany. In regard to post-war imports from Germany, it will be seen from the C. & D. of April 17 (p. 57) that during the past six months the value of wholly or partly manufactured goods brought into the United Kingdom from Germany amounted to 2,432,202l., by no means a large amount. During the past few weeks there has been a decided increase in the importation of chemicals from Germany, particularly in synthetics and chemicals like bromides caffeine, hexamine, lactic acid, phenazone, potash permanganate, and resorcin.

| | FRANCE | GERMANY | HOLLAND | BELGIUM | SWITZERLAND | SWEDEN | U.S.A. |
|----------------------------|------------------------|------------------------|-----------------|---------------|----------------|----------------|-------------------------------------|
| | | | | | | | |
| | | | | | - | | |
| Acetanilide | | _ | - | | | _ | 4,7907. |
| Acetylsalicylic acid | 648l. | 9631. | | _ | 5141. | 621. | 6981. |
| Adalin tablets | _ | | _ | | _ | 125%. | _ |
| Albargin | _ | _ | _ | | | 451. | |
| Aloin | _ | _ | | _ | 1 | | 35 %. |
| Amidol | 300l. | 1587. | | | _ | _ | |
| Amidopyrin | 5,310/. | 1.8741. | 1,7491. | 2771. | 3,3461. | _ | _ |
| Ammonium bromide | _ | 4,8817. | 652l. | 1301. | | _ | 2,2871. |
| Amyl salicylate | 1041. | | 1011. | | _ | | transa. |
| Antikamnia | | | | |) | _ | 3,831 <i>l</i> . |
| Apomorphine | | | | | | | 105 <i>l</i> . |
| Argyrol | | _ | | | - 1 | _ | 1,291l. |
| Atoxyl | 761. | _ | _ | _ | _ | _ | |
| Barbitone | 1,9421. | 2711. | _ | - ' | 758 <i>t</i> . | | |
| Benyaldehyde | | | | - 0 | | | 279l. |
| Benzoic acid | | 2,843l. | 1,055%. | | 203 <i>l</i> . | 636 <i>l</i> . | 250%. |
| Benzonaphthol | | 801. | 1,390%. | - | 190l. | _ | 1,1161. |
| Benzyl acetate | 667. | 1111. | _ | | | - | - |
| Benzyl alcohol | 351. | | _ | - | _ | - | |
| Benzyl b nzoate | 251. | 601. | | _ | _ | | _ |
| Bervillium nitrate | 811. | 1611. | 1007 | 051 | _ | _ | 12 0077 72 5 1- |
| Betanaphthol | | | 1607. | 25 <i>l</i> . | _ | _ | 11,973l. 71 brls. |
| Bromides, not described | | E061 36600 | 2401133cs. | _ | _ | = \ | 1,6411. |
| Bromine | 2101. | 596l., 166es. 257l. | 639l. | _ | \ | _ | |
| Bromstyrol | 450 <i>l</i> . | 2516. | 6391. | 148/. | | _ | 4,850% |
| Butyl alcohol | 4501. | 751. | _ | | | _ | 4,0304 |
| Butyl chloral hydrate | | 71. | | | | | 3,0281. |
| Butyric acid | 3161. | 10,6861. | 7007. | | 4501. | | J,0200. |
| Caffeine sodium salicylate | 3100. | 10,0000 | 1001. | | 1 cwt. | | |
| | | | | | 10 | | 24.7081. |
| | | 731. | _ | 25l. | | | |
| , glycerophosphate | 250l. | 1,4851. | 1641. | | | _ | 235 <i>l</i> . |
| Camphor mon bromate | 25.76. | 221. | | | _ | | _ |
| Carbon tetric doride | 2.0131. | | | _ | | | - |
| Cerium ni rate | | 2627. | | | - | _ | 555l. |
| Chinosol | | 4101. | | | _ | | |
| Chlorophyll | | 3501. | 340l., 17 pkg=. | 193l. | 1,7441. | _ | · ' ' |
| Cinchonine | | 1,007l., 6cs- | | | _ | _ | |
| Oinnamic acid | 1171. | | _ | | _ | _ | |
| Cinnamic aldehyde | | | 901. | - | _ | | |
| Cocame and salts | 7081. | 360l. | - | 33 <i>l</i> . | _ | 627 <i>l</i> . | |
| Coumaria | | 4,921/. | 655l. | _ | - | 511. | 262/ |
| Creosote, beechwood | | | - | - | - | 2,550l. | . 3261 |
| ,, carbonate | 5 50 <i>l</i> . | 260 <i>l</i> . | - | _ | 951. | - | 2,182/. |
| Diacetyl-tannin | 4007 | | _ | | 721. | | |
| Diamidophenol | 4201. | | | _ | 6711. | | |
| Diphenyl oxide | 1001. | 1501. | _ | | 3,4867. | | |
| Dimethylamido-oxyquinone | _ | 45 <i>l</i> . | _ | | 3,4001. | | |
| Emetine hydrochloride | 401. | 451. | 6971. | | 3,1711. | 3,500%. | 11,0871. |
| Formaldehyde | 401. | | 1,360i. | | 3,1716. | 0,5000 | ±1,001.11 |
| Formic acid Gallic acid | _ | | 1,000 | 910 | 721. | | - 1 |
| Geraniol | | | 4011. | 1101. | 2301. | _ | 1807. |
| Geraniol formate | _ | | 1221. | | _ | _ | |
| Geranyl acetate | | | 201. | | _ | _ | - 1 |
| Glycerophosphates | | _ | _ | _ | _ | - | 85 <i>l</i> . |
| Glycin | _ | 237. | _ | _ | 2751. | | - 1 |
| Glycyrrhizin, ammon | 150%. | _ | | 1 - | J | _ | - 1 |
| Guaiacol benzoate | | - | _ | | 887. | | - 1 |
| ., . carbonate | 685l. | 121. | - | 5757. | 7621. | _ | - 1 |
| ,, lig | () | 851. | | 857. | | | C 0607 |
| Heliotropin | 2801. | 150% | 1,3101. | _ | 1007 | 4057 | 6,062 <i>l</i> . 10 cs., 3 brls. |
| Hexamine | 5001. | 1,8141. | _ | _ | 1001. | 425 <i>l</i> . | 5 kgs., 11,064l. |
| TT 1.13.1 | | | | | | 1 | 63l. |
| Hyacinthine | | _ | _ | | _ | | 0000 |
| 0 | | | | | | | |

| | | | 1202 111115 | 210000 | | | |
|--|------------------------------------|------------------------------------|---------------------------------|---|------------------------------------|-------------------------|----------------------------------|
| | FRANCE | GERMANY | Holland | BELGIUM | SWITZERLAND | SWEDEN | U.S.A. |
| Hydrogen peroxide | 107. | | | 4707 | | | |
| Hydroquinone | 6,3v4l. | 8801. | 2457. | 432 <i>l</i> . | 781 <i>l</i> . | _ | 7,8581. |
| Hyoscine | _ | 150% | | _ | _ | | |
| Ichtbalbin | - | | _ | - | 52 <i>l</i> . | | |
| Ichtbyol | | 28 <i>l</i> . 440 <i>l</i> · | | | | 3051. | _ |
| Ionone | _ | - | _ | | 1757. | | |
| fron glycerophosphate | | 901. | | 50 <i>l</i> . | _ | - 1 | |
| Iron permanganate Lactic acid | 300 <i>l</i> . 100 <i>l</i> . | 7 6317 | 7.077 | F001 #1.1 | / | - | |
| Linalol | | 3,6111. | 163 <i>ī</i> . 84 <i>ī</i> . | 500/., 5 brls. | | | 1,3541. |
| Litbia carbonate | - | | . — | _ | _ 1 | ' | 2.3931. |
| Manganese glycerosphosphate Metagol | _ | 451. | - | _ | | _ | |
| Methyl acetanilide | _ | 71. | = | _ | 764 <i>l</i> . 74 <i>l</i> . | = | _ |
| " alcohol | _ | | | _ | - | - | 1,4051. |
| " anthranilate | 961- | 3507. | 270l. | _ | - 1 | | _ |
| ,, benzoate | = | 48 <i>l</i> . 10 <i>l</i> · | 1,1481. | _ | _ | _ | 4,2871. |
| 1-61 | | 996 <i>l</i> . | 1,1401. | 491. | = 1 | _ | 4,2011. |
| Metbylene blue | 170l. | - | | _ | 154 <i>l</i> . | | _ |
| Metol | 2,0001. | 7077 | 85 <i>l</i> • | 350%. | | _ | _ |
| Milk sugar | 9 cks. | 1231. | 100 cs. | _ | 341. | = 1 | 10l., 180 pkgs., |
| | | | | | 1 | | 651 brls. |
| Musk, artificial | 5 2 0 <i>l</i> . <i>j</i> | - | 406₹• | _ | _ | _ | _ |
| Musk xylol | 56 <i>l</i> · | 155 <i>l</i> . | _ | 9317. | | _ | _ |
| Nerolin | 607. | 123/., 3 cs. | | 9511. | _ | _ | _ |
| Nicotine sulphate | _ | - | _ | _ | _ | _ | 6,8611. |
| Novocain | | 951. | 2,7991. | 55 <i>l</i> . 18 8 <i>l</i> . | 2,8801. | 1201. | 1,500% |
| Paraformaldehyde | 2,655l· | 951. | 2,1990. | 1881- | 2,0001. | _ | 1,5001. |
| Paraldehyde | 1,450%. | 4081. | 1011. | 30 <i>l</i> . | ' — _ | - | 569l. |
| Phenacetin Phenalgin | | 461. | _ | 251. | 1,2271. | | 1,2201 |
| Pbenazone | 8,3271. | 5,4421. | 1,440% | 66 <i>l</i> . | 3,5347. | 1,3631. | 1,5821. |
| Phenetidin lactate | _ | _ | _ | \ - | 1401. | | |
| Phenol Pbenolphthalein | 1 3,4151. | 70.57 | | _ | F0.97 | _ | - |
| Phenyl acetic aldehyde | _ | 1257. 1897. | 60 <i>l</i> . 231 <i>l</i> • | _ | 5881. | _ | 313 <i>l</i> 80 <i>l</i> . |
| Photo. chemicals | - | 2651. | - | _ | _ | _ | |
| Pbtbalic acid Piperazine | - | 2261. | _ | _ | - | _ | - |
| Potass, bicarbonate | | 261. | 25cs. | | <u>-</u> | | _ |
| " bromide | 610% | 14,0797. | 18,0947. | 1011. | 6491. | 1,185%. | 5,656 <i>l</i> |
| " carbonate | _ | 36 cks | 100 cks. | | _ | _ | 10 drms. |
| " caustic cblorate | 400 kgs. | 927 drms. | 4 cs., 140 drms. 20 cks. | 20 cks. | 10 kgs. | 28l., 60 cs. 20 kgs. | _ |
| " cyanide | 400 Ags. | | 399l. | 600l. | TO Egs. | 170l. | |
| " ferrocyanide | _ | | _ | | | 5911. | |
| " permanganate " persulphate | 835 <i>l</i> . | 5,379 <i>l</i> 35 <i>l</i> . | 886l. | 1751. | 7,650 <i>l</i> . 130 <i>l</i> . | | 2881. |
| " prussiate | 42 cks. | 20 cks., | 81 cks., | 43 cks. | 1300. | 30 cks., 4 cs., | |
| | | 10 brls. | 3 es. | | | 13 brls., 19 pkgs. | |
| " sulphoguaiacolate Pyrogallic acid | 1,0701. | 4441. | | 1431. | 254 <i>l</i> . | _ | 1,3321. |
| Pyro soda | | | | | 2311. | _ | 1,3321. |
| Quinne salts | 5,3761. | 22,256 oz. | 70,230 oz. | 6,992 oz. | 6,432 oz. | 2,110 oz. | 2 9,000 <i>l</i> . |
| Rhodinol | 573 <i>l</i> . 7,700 <i>l</i> . | 6,296l. | 3301. | 211. | 300%. | 2801. | 1,0811. |
| Safrol | 1,1000 | | _ | _ | | _ | 511 <i>l</i> . 240 <i>l</i> . |
| Salienia acid | _ | 1,6351. | _ | - | _ | - | 1.920%. |
| Salicylic acid Salipyrin | 84 cs. | 16 cs. | 9 cs. | | 3 2 0 <i>l</i> . | _ | 19 brls., 10 lb. |
| Salol | 350 <i>l</i> . | 457. | _ | _ | _ | | 11 brls., 85 <i>l</i> . |
| Silver neucleinate | _ | _ | _ | 707 | 2 91 <i>l</i> . | | |
| ,, nitrate | = | 3,619 <i>l</i> . 120 <i>l</i> . | _ | 381. | 509i. | 5,6957, | 7 |
| ,, salts | = | - 1200. | = | _ | 1071. | _ | _ |
| ,, vitellin soda benzoate | _ | | _ | _ | 165l. | - | _ |
| ,, bromide | | 81 cwt. 792l., 143 cwt. | 66 owt. | | 4 cwt. | 80 cwt. | 181 cwt. |
| ,, cacodylate | 215%. | 150%. | _ | _ | _ | _ | 101 040. |
| , ichthyolate methylarsinate | _ | 4007. | _ | _ | | | _ |
| , nitrite | 42 <i>l</i> . 40 cwt. | = | = | | 421. | _ | |
| " prussiate | 479 cwt. | | 40 cwt. | _ | _ | _ | _ |
| " salicylate | 120 cwt. | 34 cwt. | | 1 +00 | - | _ | 9 cwt. |
| Stovaine | 2161. | = | = | 1 ton | | | 2 tons |
| Strontium bromide | | 571. | - | 301. | _ | _ | 1451. |
| Strychnine | _ | 1137. | | _ | _ | _ | _ |
| Supponal | | 476 <i>l</i> . | _ | | | _ | 1,994%. |
| Tannic acid | | 1101. | _ | 921. | 30 pkgs., 1,914l. | 4001. | 6, 2 54 <i>l</i> . |
| Tartaric acid | 100 cks. | 33 cs. | _ | 23 kgs., | _ | _ | _ |
| Terpin bydrate | _ | _ | | 4 cks 18 brls. | _ | | 683 <i>l</i> . |
| Terpineol | 1,6751. | 225 <i>l</i> . | _ | 1,4161. | = | _ | 1,2131. |
| Terpinyl acetate Theobromine sodium salievlate | 331. | _ | 201. | 77. | 401 | _ | _ |
| THEOUR SOMETIME ACETATE | 2,3 2 0 <i>l</i> . | 1987. | 4,4891. | 16. | 421. | _ | |
| Inorium nitrate | _ | 10,8621. | _ | _ | _ | _ | 18,788%. |
| Tin oxide Trioxymethylene | 9 3717 | 7,4031. | . – | _ | _ | _ | |
| Valuan | 8,3711. | _ | | 11 cs. | 9 cs. | | 68 cs. |
| Verdigris | 383l., 14 cks. | _ | _ | | | _ | 00 08. |
| Zinc chloride | _ | 220 <i>l</i> . | 210%. | _ | _ | _ | _ |
| " surpoate | _ | 3501. | 2106. | _ | _ | _ | _ |
| | | A | , | | | | |



Our Future Trade with Russia.



By J. H. W. Trumper.

While the attention of traders is being drawn to Russia as a possible field of future commercial enterprise on a scale hitherto unrealised by this country, it would appear useful to review broadly the position of British trade in general with the Russian Empire as it existed prior to the commencement of the war. The following remarks may therefore prove of as much value to the drug and chemical as to any other trades whose future scope may lie in the direction of that wealthy and resourceful country when it has recovered some degree of economic stability. Though Russia is at this moment an economic wilderness kept barren by revolution and civil war, the garden of promise is always there, and those who are the first to enter its gates will be the first to derive benefit from the invaluable riches which lie buried in Russian soil.

As one who has both lived in Russia and worked among Russians, the writer has little hesitation in making the assertion that, taken altogether, British trade in that country has not hitherto been a commercial success. There has not been "enough doing" for onc thing, and there has been too much bad business for another. To begin with, the British trader has an inherited mistrust of the Russian. The latter is, from the British point of view, much too casual and unbusinesslike. Furthermore, there is the difficulty of the Russian language, which is to a large extent responsible for the lack of proper organised commercial representation in all the various centres of Russian industry. There is also British insistence upon "cash down" methods of transaction. But above and beyond all there is, on the part of traders in this country, a complete misunderstanding of the Russian character. The Russian, to use standing of the Russian character. The Russian, to use a homely phrase, is a curious fellow. He drinks tea and transacts business at the same time under the shadow of his "penates," so to speak, the familiar ikon in all Russian houses. At the same time he knows what he wants, and has a great deal to say upon the subject; but the worst of it is he is generally without ready money. Voluble and plausible at the same time, he will indulge in any amount of promises. Whether these can indulge in any amount of promises. Whether these can be eventually carried out is a question, for the moment, of no importance to him. He is both odd and old-fashioned in his requirements. He is not always open to argument on the subject of popular models and makes of European manufacture as being the best kind of goods for his purpose. He looks inward to Russian tastes, and not outward to the world's conventions. For instance, he prefers gaudy colours in dyed linen, etc., and dark cloth for the making of wearing apparel. He prefers bicycles made after the pattern of the "drop-handlebar road-scorcher" to the latest type of English manufacture. He is not predisposedly dishonest. He realises his business obligations more or less to the same extent as they are realised by the trader with whom he is dealing. But he goes no further. He is, for instance, quite ready to profit by the super-trustfulness of others, and has no hesitation in getting out of commercial undertakings with anyone who allows him to do so. That he regards as legitimate business. But the chief difficulty with the Russian is that while he is at the outset honestly desirous of conducting straight business, he is very often compelled in the end to act dishonestly through want of commercial foresight. He is unable to visualise clearly the day when payments fall due, and what his financial status should properly be at that time. All this, of course, has resulted in the disinclination of British traders generally to do business with the more Russian of Russian dealers. Transactions have hitherto entailed

a risk which has not been acceptable to the well-established trading houses in this country. The latter in most cases can afford to ignore the opportunity for speculation which such dealings might offer to others of less bona-fide distinction. To traders who already possess their regular customers in more civilised parts of the world, whose regular annual profits are at all times assured, and whose business is founded upon an entirely regular basis, Russia has hitherto been too unconventional a sphere of commerce to offer any solid attraction. Any project, therefore, which they have from time to time launched in Russia has been more in the nature of an adventure than any prearranged voyage of policy. Meanwhile, it would not, of course, be true to say that even in Russia there are no regular customers of British houses. There are, in fact, many such firms. At the same time the latter have ceased to represent Russia. They have become Europeanised to such an extent that not only their original nationality has become almost extinct but they cater only for the requirements of those Russians whose education and experience abroad have made them, practically speaking, a different race. The writer's remarks, therefore, refer only to those houses which preserve all the characteristics of Russia—the houses, in fact, which properly constitute Russian trade, and with whom the British merchant has hitherto been reluctant to deal to any impressive extent

GERMAN TRADE.

The result of that reluctance, however well-founded in principle, has been in the past to surrender the greater part of Russian trade, including that of drugs and chemicals, to the German. Needless to say, the latter took in the situation at a glance and carried it to a successful issue: he was prepared to give credit. His agents were numerous and well versed in the Russian tongue. He was out to speculate and take risks accordingly. He studied Russian requirements to a nicety, and however strange or fastidious they might have appeared to him he was willing to submit himself entirely to the wants of a particular customer. He did not argue in favour of this or that German model if he saw that the Russian mistrusted it, and he seldom, if ever, criticised a demand for something which was anything but modern. merely laid himself out to carry into effect in all details the expressed form of Russian suggestion. He spared himself no pains to please, and he was always on the spot when wanted. By these methods of business the German developed a grip upon Russian trade which not even the war in its early stages, at any rate, was able to loosen. In fact it is not too much to say that Russia was at that time almost strangled in the grip of German commerce. But the success of the German, of course, was chiefly due to his readiness at all times to give credit. At the same time he never took his eyes off, so to speak, the house which owed him money. Say, for instance, he the house which owed him money. Say, for instance, he sold a consignment of goods or a machine to a Russian dealer, he always made it a bargain that as soon as those goods or that machine was resold he would immediately receive what was owing. What is more, his agents would be constantly prowling about to see that that machine was not sold without his being aware of it. He knew only too well the ways of the Russian in this respect. The sudden disappearance of firms when in inancial distress, or for less honourable reasons, never afflicted him to the extent which it has done the trusting British trader accustomed to more civilised methods of business. The German, not content with merely visiting the area in which he had disposed of his

goods, stayed there—or at least his agents did—until those goods were actually paid for or lost beyond all hope of recovery. One of the strongest characteristics, however, which the datter evinced in his commercial dealings with Russia was the extraordinary persistence with which he laboured to familiarise Russians with all goods of German origin. His success in this direction was undoubtedly the keynote to the business reputation which he enjoyed throughout the Russian Empire. One had only to mention Germany and it is hardly too much to say that the Russian was prepared to purchase with his eyes shut. On the other hand, the British trader rarely if ever got a look in when there was any serious competition on the part of the German. His goods were, comparatively speaking, unknown to the Russians, and his representatives in most cases too insufficiently acquainted with the Russian tongue to be able to introduce them to advantage. This applies as much to the trade in medicines and drugs as in any other commodity for which there is a demand in Russia.

QUININE IN RUSSIA.

Nearly all the quinine, for instance, supplied to Russia in the past came from Germany. The Russians required it chiefly in the form of hydrochloride, and sulphate was seldom, if ever, in much demand. The special kind of crystals which the Russians most favoured in pre-war days were practically unobtainable from elsewhere but Germany. It certainly was not manufactured to any large extent in this country, though there appears to be no particular reason why it should not have been. The result was, of course, that as far as quinine was con-cerned the German was the master seller—and this because he prepared it for consumption in exactly the form in which the Russian wanted it, without reference to more popular European tastes. The same may be said of other drugs and medicinal preparations which were supplied by Germany. Excellent as British preparations are, they have never yet gone down with the Russian to the same extent as German, nor has British advertisement that British goods are the best which can be procured anywhere carried much weight with a people so familiarised with German forms of supply as to be practically blind to all others. Meanwhile, since the war, Russia's demand for drugs and medicinal preparations of all kinds, as well as of all other commodities, has increased beyond count or measure. Though it is true that at present she has little or no money to buy with, she has many resources of wealth which not even the war or subsequent revolutionary strife has been able to render less real. money is there in kind, and it is up to the rest of Europe to endeavour to renew as soon as possible business relations with the Russian Empire. Indeed, one might go as far as to prophesy that Russian wealth, when properly tapped, will be found sufficient to provide for the complete economic recovery of the European world now suffering from the ravages of war. The question, therefore. so far as this country is concerned, is what is to be the future attitude of Britain to Russian trade when the latter has regained an economic stability sufficient at any rate to warrant the reopening of foreign commercial relations. One thing is clear in any case: to make British trade enterprise in that country a success we shall have to abandon altogether the conservative ideas to which we held in the past. In the first place, we shall have to study the Russian with a view to meeting him as far as possible with supplies of those articles which are more precisely to his taste than those which we can often recommend to him as being the best of their kind. In the second place, we shall have to get at the smaller Russian houses as well as the larger establishments of European name and standing, and to do this with any degree of success we shall have to give credit. Now the extension of credit to people like the Russians means in itself an entire change in our business relations with Russia. It means for one thing that we shall have to appoint firms' agents and representatives on the spot, so to speak, to protect the investments of British trade. The occasional visit of a representative to the area in which goods have been disposed of to see how things are progressing will no longer be sufficient for the purposes of

effecting good business. In view of this necessity, therefore, it would appear useful to suggest that British firms trading with Russia should unite in protecting one and another's interests to the extent that they should employ common agents and representatives to work on behalf of not one, but all. This should be easy of accomplishment, and by mutual arrangement could be so effected as to produce no conflicting elements. Taking it for granted that the demand from Russia when it comes will exceed any possible supply, there should be no difficulty in common agents and representatives in the same areas of Russia securing ample business for all and protecting equally the financial interests of all. The advantage of such an arrangement is, of course, obvious. Expense would be shared all round, and firms so united would be in a position, if necessary, to present a strong front to the Russian tradesman, thus rendering it more difficult for him to evade, should he decide to do so at any time, his commercial undertakings. It should also prove the means for the development of that general trade policy on proper organised lines for capturing the trade of Russia, which is vitally advocated to-day in political and commercial circles alike.

How to Promote Trade.

Meanwhile, with regard to supplying the Russian with what he wants rather than what we would naturally recommend, it is suggested that traders and manu facturers in this country should give their attention to the question of the setting-up of special departments to deal only with the production of goods for Russia. would facilitate business all round. As has already been emphasised above, the Russian, having set his mind upon an article of a particular nature, is seldom convinced that the substitute offered to him, though it be the product of up-to-date manufacture, is really the better of its kind. In fact, in many cases he prefers the article which, owing to its lack of up-to-date qualifications, is more often than not asked for in vain from this country. The existence, however, of a special department to deal with Russian demands should obviate such contingencies for the future. Its business should be to make a detailed study of the peculiar wants of a people not yet educated to the standard of normal European requirements, and to turn out the goods accordingly. If this is accomplished the writer is convinced that there would be little diffi-culty in British traders getting as much business in Russia as they could possibly handle for many years to come, and for that reason alone is the suggestion put forward. Apart from this, however, the creation of such special departments would go far to cement a real understanding between Russian and British traders which would make its influence felt to the benefit of both nations alike. On the other hand, if we do nothing and rely upon the same policy towards Russian trade as existed in pre-war days, the German must eventually regain his commercial hold upon Russia. Finally, Russia is a very rich country. As has already been pointed out above, her resources do not exist in gold coin or paper money, but in invaluable riches which lie buried in her soil. That soil has to be properly worked, and there is enough inherent wealth in it to bring prosperity not only to Russia herself, but to the rest of the nations of Europe. The question is, Who is going to get the greater share of it? Not Russia, who herself wants so much, but the nation who is going to supply her with most of what she wants. Will that nation be Great Britain? Why not? At any rate, now is the time for British traders in drugs and medicinal preparations of all kinds to set about taking the lead and establishing what is now quite possible—their future supremacy in Russia.

THE TOXICITY OF MISTLETCE, MM. Bardier and Martin-Sans informed the Society of Biology, varies according to the tree on which it grows. Experiments made on animals showed that when mistletce is gathered from the poplar, a much smaller dose is fatal than when collected from the pine or apple tree. This difference, they consider, should be borne in mind with reference to the posology of extracts of mistletce used in therapeutics.

The Stramonium-leaves of Commerce.

By E. M. Holmes, F.L.S.

The difficulty of obtaining genuine stramonium-leavesi.e., the leaves of Datura Stramonium, L.-is remarkable. The plant can easily be grown on good soil in this country. especially in the south, and in warm, sheltered situations, although easily killed by the October frosts. If the seed be raised under glass in March and planted out in May, a good crop of foliage can be got in August and September. Self-sown seedlings usually come up in May, and if in good soil make rapid progress. The soil that suits vegetable marrows, or any soil containing plenty of vegetable débris, serves equally well for stramonium.

But the temptation to lower the price of the home article by buying Continental produce is not calculated to encourage cultivation in this country, yet at the present time it would pay the wholesale buyer to pay 1s. 6d. per lb. for genuine leaves grown in this country rather than to purchase Continental stramonium. As long ago as 1901 Mr. J. Slinger Ward ("P. J." (4), xii. 326; "Y.B. Pharm.," 1901, p. 167) directed attention to the adulteration of stramonium leaves with these of Vorth. adulteration of stramonium-leaves with those of Xanthium strumarium, L., and Carthanus helenoides; and Mr. T. E. Wallis pointed out the distinctive histological

characters of the leaves of these two plants.

In 1916 Xunthium strumarium was again detected in stramonium-leaves ("P. J." (4), 43, 404). The characters given to distinguish these leaves ("Y.-B. Pharm.," 1917. p. 214) were the large, short, three-celled hars containing cystoliths of CaCO3 in the lowest cell, and the absence of rosette crystals of calcium oxalate. To the naked eye the serrated margin of the leaves, best seen when soaked out, and the hairy surface serve to show they are not D. Stramonium.

In 1918 M. Guerin ("J. Pharm. et Chimie," 17, p. 102) found that the leaves of D. Stramonium were entirely substituted by those of Xauthium macrocarpum, DC., of Spanish origin, and the author gave the distinctive microscopical characters of the true and false drug, The publication of his paper does not appear, however, to have had any influence in stopping the exportation of the false stramonium, since Evans Sons Lescher & Webb, Ltd.. comment on its occurrence in their recently published analytical report, and during the last month I have received for examination and report specimens of Spanish stramonium, both from Liverpool and London, which consisted wholly of the leaves of Xanthium macrocarpum.

As stramonium-leaves are utilised in very considerable quantity for manufacturing cigarettes, used as a remedy for asthma (one firm alone utilising two tons per month of the leaves), it becomes a serious matter to prevent an occurrence would hardly be possible in the United States, where imported drugs are carefully and critically examined by the Government inspector. A similar officer should be appointed at all our large ports where foreign drugs arrive. By this means only will it be possible to compete with Continental prices and grow genuine medicinal plants in this country as an industry. Labour and transport troubles are now affecting Continental countries also, and this will have somewhat the effect of a protective tariff. Great Britain, however, has an advantage botanically over many Continental countries, in the fact that she does not possess so rich a flora, so that, in the present case, stramonium-leaf grown in this country is not likely to be adulterated, certainly not with Xanthium strumarium or X. macrocarpum, since these plants are not indigenous to Britain. The same applies to many other herbs; thus Marrubium vulgare is the only native species in this country, while in Spain there are four native species, one of which, M. candidissimum, has occasionally been found mixed with or substituted for, M. rulgare. An American consignment of M. vulgare imported from Greece not very long ago was found to belong to another species, lacking in the properties of the genuine plant, and if the quantity required could have been purchased in England the buyers would have been saved both trouble and expense, but so long as inferior and adulterated drugs are allowed to enter our ports at a cheap rate and without examination there is no eucouragement to the English grower to supply a good and genuine article, especially at the price of an adulterated or false imported one. The British Department of Agriculture apparently takes no interest in helping this industry, and has not followed the right course, which would be to ascertain through the Board of Trade the amount of medicinal plants that are being continually imported, but which could easily be cultivated

in and supplied by this country.

Even a reference to the lists of imported herbs given in the C. & D. would reveal how large a quantity comes from Continental countries, and an inquiry of some of the leading firms who export medicinal plants to the United States and Russia would show how important a market is awaiting genuine British medicinal plants in both these immense territories. Otherwise, those countries which make the teaching of practical economic botany instead of "examination" botany a part of the education in national schools will secure a large export industry in which Britain could, and should, take the lead. Buyers of Spanish herbs in this country will be well advised to buy only from samples properly authenticated by botanists in this country. Out of eight samples of Spanish herbs recently submitted to me by the importer for examination, only two were genuine! The reason for the substitution of Xanthium macrocarpum for Datura Stramonium is difficult to understand. for Datura Stramonium, as well as Dotura Tatula, L., occurs almost throughout Spain, and it as well as Datura Metel, L., D. ferox, L., and D. fastuosa, L., and D. suaveolens, H. and B., occur in Spain, and are well enough known to possess native names, while Xanthium macrocarpum has no native name, but occurs in the east and south of Spain, where D. Metel and D. ferox also occur. It indicates, at all events, that the peasants in Spain are not so familiar with the useful and medicinal plants of their own country as are the Germans and Austrians with theirs. The only points of resemblance between D. Stramonium and the Xanthium macrocarpum are the shape of the leaves and the spiny fruit, but the Xanthium has the leaves and stems covered with short, stiff hairs and the "fruits," or, rather, involucres. contain only two achenes instead of numerous, black. kidney-shaped seeds, as in Datura Stramonium, and it has no tubular, funnel-shaped, white flowers like stra-monium. Those who gather the plant cannot have received from the merchant the native Spanish name, but probably only a description of the leaf as being somewhat like a fig-leaf, with a prickly fruit, and possibly no allusion to the white, funnel-shaped flower and the numerons black seeds. It is hardly conceivable that the leaves of Xanthium should be exported by a well-educated merchant or by one familiar with the botanical character of the plants sold. However, in this country I have known the root of Centranthus ruber to have been collected and dried by the cwt., as that of Valeriana officinalis, by a lady who was confident that she knew the valerian required for medicinal use, with the result of pecuniary loss to herself and considerable inconvenience to the would-

MR. SAMSON ROSENBLATT, importer and exporter of chemicals and drugs, has removed to 65 Fulton Street. New York.

C. J. Hewlett & Son, Ltd., Charlotte Street and Curtain Road, London, E.C. 2, inform us that their premises will be closed on June 26, the occasion of the annual outing of the staff.

Mr. L. J. Sloper, chemist and druggist, has relinquished his position on the staff of Burroughs Wellcome Co. in order to open a pharmacy at 169 Wimborne Road, Bournemouth.

WILLOWS, FRANCIS, BUTLER & THOMPSON, LTD., 40 Aldersgate Street, London, E.C. 1, inform us that July 3 has been fixed for the annual excursion of their staff, and that their premises will be closed on that date.

Cape Buchu Control.

Cape Government continues to exercise strict control over the gathering of buchu-leaves, and has lately made the terms and conditions more onerous. These are given in full in the "Province of Cape of Good Hope Gazette Extraordinary" (April 21), a copy of which we recently received. They are as follows:

Buchu-To Buy.

Buchu—To Buy.

Yearly licence, January 1 to December 31 ... £1 0 0
(No half-yearly licence.)

1. The word "buchu" shall mean and include any variety or species of the plant buchu, which from time to time may be designated by Proclamation as being subject to the provisions of this Ordinance, and any leaves, branches, roots, or other portions of such plant.

"Buyer's licence" shall mean a licence duly issued for the purpose of buying buchu.

"Picking permit" shall mean a permit or licence duly issued for the purpose of picking, plucking, cutting, or gathering buchu.

issued for the gathering buchu.

2. It shall not be lawful for any person to buy buchu for purposes of trade or profit unless such person shall first have obtained a licence so to buy. Such buyer's licence shall be issued by the Receiver of Revenue of the district in which the applicant therefor resides, upon payment of the sum of IL, and shall apply only to the calendar year in which it is issued.

which it is issued.

3. Every purchaser of buchu under a buyer's licence, as in the last preceding section provided, who purchases such buchu from the picker, plucker, cutter or gatherer thereof, or from the proprietor of the land upon which it was so picked, plucked, cut or gathered, shall keep a register in which he shall at the time of purchase forthwith enter or cause to be entered the quantity of buchu purchased by him from time to time, together with the following particulars viz.

ticulars, viz.:

(a) The date of purchase of the buchu; (b) the weight of buchu purchased;

(c) the name, residence and occupation of the vendor: (d) the name of the farm or other property or locality on which the buchu is alleged to have been picked, plucked, cut

which the buchu is alleged to have been picked, piucked, cut or gathered;

(e) the nature of proof adduced by the vendor as to lawful possession of the buchu sold;

(f) in respect to buchu picked, plucked, cut or gathered on public lands, the date, number and place of issue of picking permit or licence held by the vendor as hereinafter provided for: provided for;

(g) in respect of buchu picked, placked, out or gathered on private land, the date and name of the person signing any permit or permission to pick, pluck, cut or gather, issued by or on behalf of the property owner in terms of

any permit or permission to pick, piuck, cut or gather, issued by or on behalf of the property owner in terms of the succeeding sections.

A true copy of the entries in the said register shall be delivered by such purchaser to any person to whom he may sell any buchu to which such entries refer, and the said register or copy thereof, as the case may be, shall be protod to do so by any Magistrate, Police or Forcst Officer or other officer duly authorised thereto by the Administrator.

4. (1) It shall not be lawful for any person to pick, pluck, cut or gather buchu on Crown land, or upon land vested in any Municipal Council, Divisional Council or other similar public body or local authority without a picking permit, in such form as may be prescribed, signed by the Magistrate or Assistant Magistrate of the district in which the permit-holder desires to pick, pluck, cut or gather: Provided that in respect of land under the control of the Forest Department a licence issued by that Department in terms of the Forest Acts shall take the place of the aforesaid picking permit. said picking permit.
(2) It shall not be lawful for any person to pick.

(2) It shall not be lawful for any person to pick, pluck, cut or gather, remove or be in possession of any buchu, the produce of private land, for the purpose of sale, trade or profit, save and except the proprietor of such land, or such person as he shall have duly permitted or authorised in writing, and any such person so authorised in writing shall, when he sells any buchu which has been gathered under any such authority, deliver the document conferring such authority to the purchaser.

rity to the purchaser.

5. It shall be lawful for the Administrator to make by 5. It shall be lawful for the Administrator to make by Proclamation regulations for the general carrying out of and giving effect to the provisions of this Ordinance so far as it relates to buchu, including regulations providing for refusal to issue or for restrictions in number of buyers' licences or of picking permits; provided that there shall be no restriction of licences issued, in terms of the Forest Acts, by the Forest Department, for the cstablishment of close seasons during which no buchu shall be cut, gathered, plucked or picked, or for the entire prohibition of the critting, gathering, picking or plucking of buchu in defined areas and for defined periods: Provided that no close season shall be established over lands controlled by the Forest Department except with the concurrence of the Chief Conservator of Forests; and provided further that in respect to lands mentioned in sub-section (2) of section four no close season or entire prohibition shall exceed nine consecutive months in

or entire prohibition shall exceed nine consecutive months in any one year. All such regulations shall have the force of law, shall be enforceable in the Court of any Magistrate or detached Assistant Magistrate in the Cape Province, and may be applied to one or more districts.

6. Any person who without a buyer's licence as hereinbefore provided shall purchase buchu for purposes of trade or profit, or who shall fail to keep a register or deliver a copy of any relevant entry therein, or any person who, without a picking permit, licence or authority, shall pick, pluck, cut. gather or be in possession for purposes of trade or out a picking permit, licence or authority, shall pick, pluck, cut, gather or be in possession for purposes of trade or profit of any buchu, and any person who shall at any time refuse to produce or shall refuse to allow the production and inspection of such licence, register, permit or authority, or who shall in any way obstruct or interfere with such production and inspection on demand of any Magistrate. Police or Forest Officer or other official duly authorised by the Administrator, shall, upon conviction be liable to a penalty not exceeding 50l., or to imprisonment, with or without hard labour, for any period not exceeding six months, or to both such fine and such imprisonment. Any person found in possession of any buchu shall be deemed to be guilty of a contravention of this Ordinance, unless he shall prove to the satisfaction of the Court that he possesses the necessary licence, permit or authority, or obtained the the necessary licence, permit or authority, or obtained the buchu in a lawful manner.

In our issue of May 29 we notified the fact that tenders were invited for 24,000 lb. of short buchu (Barosma betulina), and we now note, from the "Cape Times," that the Union Tender Board has accepted the tender of Thomson. Watson & Co., Cape Town, for the purchase of buchu (quantity not stated) at 10s. 6d. per lb.

The Economic Resources of Burma.

IX.—Quinine Tablets.

The Burma administration report for 1917-18 states that owing to the greatly enhanced price of quinine sulphate other alkaloids of quinine available at a cheaper rate were substituted for sale to the public through Treasury officers and licensed vendors. Tablets of residual alkaloids, and to a smaller extent of cinchona febrifuge, were manufactured as substitutes for quinine sulphate at the Rangoon Central Jail and issued for sale during the latter half of 1917. The output of the Quinine Department of the Rangoon Central Jail for 1917 comprised 1,521,910 five-grain tablets of quinine sulphate and 1,823,600 one-grain tablets, 678,080 tablets each containing two grains of residual alkaloid, and 1,400,800 tablets each containing half a grain, and 45,120 five-grain and 60,800 one-grain tablets of cinchona febrifuge. The total output thus fell short of that of the previous year. when over ten million tablets were manufactured, and all indents could not be supplied in full. The cost of manufacture amounted to Rs. 10,668 and of packing and despatch Rs. 472. A total of 18,122,000 grains of cinchona alkaloids, including quinine sulphate, was sold by Treasury officers; in the previous year 39,218,400 grains of quinine sulphate had been sold. Free distribution on a small scale was carried out in 15 districts. We are not told how the cost of manufacture is arrived at or if in the calculation, the fact that free jail officials are serving for a pension, is taken into account. There is evidently a large demand for these tablets, and they doubtless assist a large demand for these tablets, and they dodored a very ignorant and poverty-stricken population in combating the ravages of malaria, which works such havoc in many of the Burma districts. The deaths from cholera, plague, and smallpox combined do not probably cause one tenth of those of which malaria is the direct cause, and the nearest European doctor is often residing several days' journey from where the sickness happens.

Celluloid Industry in Japan.

CELLULOID was first imported into Japan in 1884, although a few sample pieces were introduced from 1877 The manufacture was initiated in 1889 by Rokusaburo Kocho, who established works at Nakanogo, in the vicinity of Tokyo, but it remained undeveloped until 1903, when two large factories were built by the Nippon Celluloid and Artificial Silk Co. and the Sakai Celluloid Co., respectively. The former were erected at Aboshi, near Kobe, and managed by Dr. J. L. Keen, an English expert, and the latter was conducted by Dr. C. Axtel, an American chemist, who chose a site at Sakai, near Ozaka. After initial difficulties both firms succeeded in marketing their products in 1910, but subsequently, owing to over-supply, severe competition took place between them. In 1914, after both works had reduced their output by one-half, the war materially influenced their prosperity. The Nippon company received an enormous order for guncotton from the Russian Government, greatly increased the capacity of its works, and quickly made good the losses it had suffered during the previous years; at the same time the Sakai company obtained a monopoly of the supply of celluloid sheets and reaped great profits. Owing to the utilisation of the celluloid factories of foreign belligerents for war-time services, the Japanese celluloid and camphor industries received a great impetus, many new plants were erected, and, in general, the industry was placed on a very sound footing.

According to the annual reports of the Japanese Customs Bureau, initiated in 1896, importations of celluloid sheets, etc., have been as follows (kin. = 1.33 lb., yen

| ., . | | | | | |
|--------------|------|---|-------|------------------|------------------|
| Year | | | | Quantity Cwt. | Value £ |
| 1896 | | | | 882 | 13,445 |
| 1905 | | , | | 3,547 | 49,687 |
| 1906 | | | | 2,456 | 81,812 |
| 1907 | | | | 2.374 | 32,070 |
| 1908 | | | | 5,308 | 66,832 |
| 1909 | | | • • • | 4,780 | 59,122 |
| 1910 1911 | | | | 5,661 5,980 | 64.029 67.131 |
| 1912 | | | | 4,471 | 49.288 |
| 1914 | | | | 273 | 2,952 |
| 1915 | | | | 104 | 1,080 |
| 1916 | | | | 2.25 | 25.7 |
| 1917 | | | | [4 lb.] | 6 |
| | | | | | |

The export trade dates only from the year 1918. The following returns are available for 1919:

| Destination | Novelty Articles. | Sheets £ |
|-----------------------------|----------------------|-------------|
| United States | . 200,000 | |
| Russia | . 150,000 | |
| British India and Australia | . 150.000 | - |
| England | | 100,000 |
| France and Italy | | 200,000 |

More recently the export trade has been stimulated by the increased tonnage available.

In addition to the two firms above mentioned, there were at least ten others of considerable size manufacturing celluloid sheets. Towards the end of last year six of the latter amalgamated with the two pioneers to found the Dai Nippon Celluloid Co., with a capital of 12½ million yen (1.250,000l.). In addition there are a few firms, such as the Toa Celluloid Co., which supply raw sheets to the factories at which novelty goods are made. The total annual production of celluloid sheets, rods, tubes, etc., is estimated at 6 million lb., of which two-thirds is consumed in the country for making novelty articles. Although it is not possible to give the number of makers of these goods, as much of the work is done domestically, it is very large; in the neighbourhood of Tokyo alone there are over 700 works. The most important manufacturing firms are the Nagaminé, the Chigusa, and the Central Celluloid Co., at Tokyo, and the Koyama and Sakai Celluloid companies at Ozaka. In general, toys, dolls, etc., are made in Tokyo, and brushes, beads, etc., at Ozaka.—"Journal Society Chemical Industry."

N-gai Camphor.

The high price of camphor and its rapidly increasing use for technical purposes have naturally directed attention to the possible use of substitutes. It is remarkable that the substance known under the above name has not been tested before now in Europe for technical purposes, such as the manufacture of celluloid, since its properties were investigated and recorded by Mr. Sidney Plowman from specimens supplied by the late Daniel Hanbury, and an account of them published in the "Pharmaceutical Journal" (3rd series, vol. iv., pp. 709-712. March 7, 1874). The probable reason was the relative cost, for M. Rondot, in his work on Chinese Commerce, "Etude Pratique du Commerce d'Exportation de la Chine," Paris, 1848, quotes the price per picul, of 133\forall b. of the various camphors as follows:

Formosa camphor, \$25; Japan camphor, \$30; N-gai camphor, \$250; Malay (Borneo) camphor, first quality, \$2,000, second quality, \$1,000. N-gai camphor being about ten times the price of ordinary camphor. Now that ordinary camphor is about ten times the price it was before the war, N-gai camphor might possibly come into competition with it. At that date very, little was known about N-gai camphor, and Mr. Hanbury drew attention to it in the Admiralty manual of "Scientific Inquiry" in 1871 by the question, "What is the camphor said to be obtained from a species of Artemisia (wormwood) called N-gai?" In reply to this inquiry Mr. T. H. Ewer, of the Imperial Maritime Customs, Canton, sent to Mr. Hanbury specimens of the camphor, together with a small branch of the plant from which it is made. The botanical specimen was identified by Mr. Hanbury as Blumea balsamifera, DC., a tall, coarse-looking herbaceous plant belonging to the natural order Compositie. It is an abundant weed in Assam and Burmah, and is common throughout the East Indian Islands. The camphor is used in China in the manufacture of the scented kinds of Chinese ink, about 3,000l. worth being annually exported, according to Mr. Ewer, from Canton to Shanghai and Ningpo, whence it finds its way to the ink factories of Weichau and other places.

Mason, in "Burmah, its People and Natural Produc-

Mason, in "Burmah, its People and Natural Productions" (2nd edition, 1860, p. 483), states that some time previously a European named O'Riley purified 100 lb. of this camphor and sent it to Calcutta, where it was reported to be as good as ordinary camphor. According to the results obtained by Mr. Sidney Plowman from the chemical and physical examination of N-gai camphor, it comes near to Borneo camphor (from Dryobalanops aromatica), with which it is isomeric, but differs in its much higher volatility, its somewhat greater hardness and brittleness, and its odour more nearly approximating to that of ordinary camphor. Like Borneo camphor, it is heavier than water. It also resembles that camphor in the fact that, when treated with nitric acid, it gives an oil which, in contact with water, yields ordinary camphor. With respect to the botanical source of N-gai camphor, are. Hanbury pointed out that the Chinese name N-gai is applied to several plants, including both Labiatæ and Compositæ. It may therefore be commercially obtained from more than one species.

The actual percentage of camphor obtainable from the plant does not appear to have been published, but the fact that the plant is herbaceous and will probably yield camphor in much less time than it could be obtained from a slow-growing tree, and which, moreover, grows readily as a weed, is suggestive that a research made in a tropical botanic garden might lead to the discovery of forms yielding a higher percentage of camphor than the wild forms, and experiments made at the Imperial Institute might determine if it could replace ordinary camphor in the manufacture of celluloid. The fact that plants of the Labiatee and Compositee in tropical climates yield camphor suggests that plants of the same natural orders in temperate climates yielding camphor may be worthy of research. For example, feverfew (Matricaria Parthenium) yields a camphor that differs only from laurel camphor in its left-handed polarisation of a ray of light.

Trade Report.

42 Cannon Street, E.C. 4, June 23.

THE end of the half-year finishes up with business in Mincing Lane of a continued meagre description, and the tendency of prices of practically all produce, with the exception of shellac, honey, and canary-seed, is still downwards. Whether prices are already sufficiently low it is difficult to say, but the question of finance and the operation of the excess profits duty stifles any inducement to enter new commitments. At the same time it must be pointed out that the arrivals of all kinds of produce from overseas continues to be received in a larger volume than ever, but these consignments were no doubt arranged for before the present burden of taxation and dear money was realised. The result is that the finance difficulty is becoming more acute with some firms, and goods are being pressed on a market with more sellers than buyers. The opinion is expressed by those in a position to judge that the present depression may last during the next two or three months, and if trouble can be averted, nobody will be more surprised than 'Mincing Lane habitués. Up to the time of closing for press—Wednesday morning —there had been few alterations to report. Among crude drugs little business is passing. Colocynth is held at a slight advance, and honey has been selling at higher prices for better grades. Cascara, ipecacuanha, and senna are inactive. Japanese refined camphor is the turn better than last week. Menthol is unsettled and lower. Castor oil is cheaper. The demand for spices and seeds continues slow, black pepper being rather lower again, spot stocks being very large. Zanzibar cloves are easier, and cinnamon is cheaper. Jamaica ginger is neglected, but present high price is likely to be maintained in view of the small supply. Canary-seed is steady after last week's advance, which was due to speculation. Cumin is also steady, and fennel is becoming scarce. Among pharmaceutical chemicals, acetanilide, aspirin, salicylic acid, chloral hydrate, paraldehyde, and sulphonal have eased in value. Silver nitrate is dearer

Higher.—Arsenic, canary-seed, colocynth, isinglass, silver nitrate, shellac.

nitrate, shellac.

Firmer.—Honey, linseed oil.

Easier.—Anise oil, aspirin, chloral hydrate, citric acid, cloves (Zanzibat), copper sulphate, cream of tartar, farina, ginger (Japanese), lemongrass oil, mint oil (Japanese), paraldehyde, pepper, pimento, resin, spike oil (Spanish), sulphonal, tonka beans.

Lower.—Acetanilide, bergamot oil, caraway oil, castor oil, citronella oils, clove oil, coconut oil, geranium oil (Bourb. and Af.), lead products, lemon oil, menthol, mercury, mustard oil (artif.), orange (Sic. and Sp.), palm oil, petitgrain oil (Para.), platinum, salicylic acid, thyme oil (Sp.), curpentine. oil (Sp.), turpentine.

The Drug-auctions will be held next Thursday, July 1.

Cablegram.

NEW YORK, June 23.—Business is fair. Menthol is lower at \$8.40, and balsam tolu has been reduced to \$1.25. Saccharin is lower at \$4.00 per lb. Hexamine has advanced to \$3.75.

ACETANILIDE is easier, spot parcels offering at from

4s. to 4s. 3d. per lb. as to quantity.

AGAR-AGAR continues quiet, the value of No. 1 Kobe strip on the spot being 2s. 9d. and No. 2 Yokohama 2s. 6d. per lb. The exports from Japan during March amounted to 159,793 kin, valued at 247,656 yen. During the three months ended March 31 they were as follows:

1918 8°0,384 879,751 1920 1919 346,035 Kin 462,573 582,113 Yen 536,451

ALOES.—Curação is plentiful, good ordinary offering at 190s. per cwt. and livery at 115s. We note, the arrival of 168 cases direct from Curação to Liverpool. The exports from the Union of South Africa during February 1920 amounted to 28,024 lb. (4201.), against 168,828 lb. (1,802l.) in February 1919.

Antimony has continued weak, due to a pronounced Antmony has continued weak, due to a pronounced slackness of demand, and although English refined is retained at 60l. to 63l., offers of foreign regulus have been made down to 45l, c.i.f. to arrive. The severe depression in silver and the consequently freer offers restrain buyers. Crude is quite nominal at 40l, per ton.

Arsenic.—There is a good demand for white Cornish powder, which is much firmer and commands about 74l. per ton delivered, and Grecian is obtainable at 68l, c.i.f.

to arrive.

ASPIRIN is offered at rather lower rates, dealers quoting from 5s. 6d. to 6s. per lb. as to quantity, and 5s. 6d.

c.i.f. to arrive.

BUCHU is firm and scarce, with 14s. per lb. asked for good green round and 12s. 6d. for ovals. The exports from the Union of South Africa during February 1920 amounted to 18,824 lb. (7,784l.,) against 20.551 lb. (3,597l.) in February 1919.

CAMPHOR (CRUDE).—Chinese is quoted at 5s. per lb. on the spot, and June-August shipment at 4s. per lb. c.i.f.

Camphor (Refined).—Japanese 2½-lb. slabs have not been quite so depressed, and prices have improved about 6d, per lb., with spot sales at 8s. 6d. to 8s. 3d. exports from Japan during March amounted to 106,956 kin, valued at 575,390 yen. During the three months ended March 31 they were as follows:

... 508,419 517,338 1,449,101 1,898,220 Ven

CANARY-SEED continued to advance in price all last week, and has since remained steady at the closing quotations of 175s. per quarter for good Morocco and at 140s.

Castor Oil is lower, Hull make of pharmaceutical quality offering at 86l. per ton, first pressing at 83l. and second pressing at 81l. net, barrels included, ex works Hull. French medicinal in barrels is quoted at 107s. 6d. on the spot. French oil in cases is stated to be unobtainable on spot, and for shipment f.o.b. Marseilles is quoted at 125l. per ton. In barrels the spot price is 100l. per ton ex wharf London.

CHLORAL HYDRATE is easier, duty-paid crystals offering

at from 7s. 3d. to 7s. 6d. per lb.

CITRIC ACID continues slow of sale, with spot sellers

at 5s. 6d. per lb., less the usual discount.

Coconut Oil is lower for Ceylon in pipes, which is offered afloat at 82l. per ton, and Singapore in cases at 701. c.i.f.

Cod-liver Oil.—Our Bergen correspondent writes on June 15 that the Finmarken fishing is now closing, and the final report may be expected in a few days. The results up to June 12 are as follows:

1918 1920 Catch of cod (millions) ... Catch of cod (millions) ... 23.5 Yield of c.l.o. (hect.) ... 19,800 Liver for "raw" oils (hect.) ... 16,100 23.5 29.0 36.6 35,000 54,700 5,000

There was rather a better feeling on the market, but There was rather a better reeling on the market, our prices are unchanged. The total exports of cod-liver oil up to the end of May amount to 15,900 barrels. The official report of the Finmarken fishing from the commencement—April 12 to June 5—shows a catch of 4,410,000, with a yield of 6,873 hect., leaving 1,785 hect. of liver for crude oil. In London, agents quote finest medicinal Lofoten oil at 305s. per barrel.

Colocynth.—Good pale pith is held for the advanced rates of 2s. 3d. to 2s. 6d. per lb. and 2s. for dull yellow.

Turkey apple is 2s. and Spanish 1s. 3d. per lb.

COPPER SULPHATE.—The export demand continues poor, and merchants are in a pessimistic mood, the prospect of new overseas business being anything but bright. exports are absurdly small compared with what they used to be even during the war-period, when good allocations were made to France under control. Home-trade price is 45l. to 46l. per ton, and export 45l. f.o.b. Liverpool in casks.

COTTONSEED OIL has dropped heavily during the last few weeks, more especially for crude oil, while the much better supply of cottonseed and the poor demand are checking purchases. Edible oil is wanted in fair quantities by margarine manufacturers, and its value has not teen depressed in the same proportion as crude oil. Bombay crude on spot is 60s. Egyptian crude 70s., and deo-

dorised 90s. spot.

CREAM OF TARTAR meets with a slow sale, prices being unchanged at from 295s. to 300s. per cwt. for 99 to 100 per unchanged at from 295s. cent. powder on the spot. Arrivals have taken place more freely, including Spanish, the output of which has

increased and quality improved.

CREOSOTE (BEECHWOOD).-As Sweden is the principal source of production of genuine beechwood creosote, we would draw attention to the production in other countries where beechwood is not available. The resulting creosote is offered on our market as "Creosote B.P.," and sometimes as "Beechwood Creosote B.P." But as beech-tar is the only source of creosote specified in the British Pharmacopœia, it appears that no other creosote is really B.P. Hence the necessity of taking the source of the article into consideration. We believe chemical investigations of the two types of creosote are being made. Genuine beechwood creosote is worth 10s. per lb., whilst the creosote we refer to is available at about 4s. per lb. in New York. We fear a good deal of so-called "Beechwood" creosote is not truly described.

Cumin-seed is steady at 42s. 6d. per cwt. for good sifted Morocco, and is likely to remain so if the report

of a short crop this season is confirmed.

DIGITALIS-LEAVES .- For Spanish in quantity 6d. per

lb. would be accepted for round lots.

EGG-PRODUCTS continue quiet. Chinese liquid hen-yolk containing 2 per cent. boric acid is offered at 75s. per cwt. on the spot, and June-September shipment is 72s. 6d. c.i.f. Dried native whole is 10d. per lb. on the spot, sprayed whole egg 2s., and dried yolk 9d. per lb.

ERGOT.—The Hemland has brought 5 cases of ergot

to Liverpool from Sweden.

FARINA is quiet and easier, No. 1 Japanese offering at 27s. per cwt. on the spot, and for July-August shipment 27s. c.i.f. London is quoted. Swect on the spot is 27s. per cwt.

FENNEL-SEED.—Further sales have been made at 34s. per cwt., but this article is becoming scarce.

FENUGREEK-SEED.—A good quantity of rather dull seed has been sold at 9s. per cwt., but for fair quality the quotation is 9s. 6d. to 10s.

GINGER .- Small sales of Sierra Leone have been made in Liverpool at 55s. per cwt. ex store. In London the

value of Japanese is about 62s. 6d.

Honey is one of the very few products which maintains its values, and some of the better grade of Jamaican and Californian have been sold at higher prices. Up to 105s, per cwt. is reported to have been paid for good pale set Jamaica. Cuban has been done at from 85s. down to 778. 6d. as to quality. San Domingo has been sold at 85s. and Australian at 75s. to 77s. 6d. per cwt.

IFECACUANHA is inactive, sellers of Matto Grosso quoting from 20s. to 22s. 6d. for ordinary dull to good stout.

Minas is 21s. and Cartagena 20s. per lb.

Lead-Products.—In the latter part of last week the tendency was decidedly weaker, prices having been reduced all round to the extent of 3l. to 4l. per ton for white lead and 3l. 5s. per ton for lead oxides. Quotations were fixed thus: Dry white lead 63l. 15s., and ground white lead in oil at 73l. 5s., f.o.b. for export. Red lead and litharge for lots of under 5 tons were placed on the basis of 59l. 15s., and for 5 tons and over, 58l. 5s. a ton, both for the home trade and export. These reductions were chiefly due to the demoralised state of the market for pig lead, the tendency of which has since improved, due to a revival of buying at a much lower level. has been a lot of irritation among home manufacturers in regard to the detrimental effect upon their business caused by the "rigging" of prices in raw material.

LINSEED OIL.—Quotations have shown a slight tendency to rally from the worst, but confidence is lacking, and consumers are buying very sparingly. Speculative resales were pressed recently, while the export demand is kept in narrow compass, although there is still a fair demand on American account in order to relieve the dearth of spot supplies on the other side. The backwardation on forward positions has been considerably reduced of late, and there is thus a feeling that in spite of possible

spasmodic rallies, the market will settle down to an appreciably lower level, despite the complaint on the part of crushers that it does not pay them to turn out oil at the current rates obtainable. Spot (London) closed at 75s. 6d. and Hull at 73s. 6d. naked.

MENTHOL is irregular and unsettled, with spot sales of Kobayashi-Suzuki at from 40s. to 38s. per lb., and for Yazawa 36s. is quoted. The exports from Japan during March amounted to 47,839 kin, valued at 705,884 During the three months ended March 31 they were as follows:

1919 Kin ... 49,785 49,785 ... 308,065 32,990 67,369 Yen ... 312,993 1.010.613

OLIVE OIL .- It is reported from Bari that the new crop promises well. Producers and dealers have induced the Italian Government to lower the quantity of oil which has to be left for local consumption before export may take place. The quantity is now 25 per cent. of that to be shipped, and with the next crop further concessions are promised. The uncontrolled price is about 1,550 lire per 100 kilos. for "extra" qualities. In London edible French oils are quoted at from 20s. to 24s. per gal., and Spanish at from 19s. to 22s. per gal.

OPIUM.—The London market remains steady, with rather more business passing at from 19s. 6d. to 20s. per lb. spot for 12-per-cent. druggists'. Cable news from primary markets is lacking this week, added to which there is considerable delay and irregularity in the mails from

Turkev.

SAYRNA, May 22.—The sales on our market amount to 54 cases at 920 piasters to 1,075 piasters per oke, as to strength and quality, which is equal to 17s. to 20s. per lb. c.i.f. The exchange to-day is 435 piasters for cheque per pound sterling, and 80.89 for one Turkish paper pound. The arrivals are 1,665 oases, against 662 at same date last year.

SMYENA, June 5.—Early this week several buyers came forward and started buying everything in the shape and name of opium at 750 piasters to 950 piasters per oke for low grades and 1,025 piasters to 1,100 piasters for Karahissar and Yerlis, according to quality and strength. Three cases of eight-year-old very low-grade stuff also changed hands at 480 piasters. The purchases this week, amounting in all to 114 cases, are mostly, we presume, to fulfil Japanese engagements, and above piaster prices, barring the low 480-piaster stuff, are equal at to-day's rate of exchange to 14s, to 17s. 8d. per lb. c.i.f. for the current qualities, and 19s. to 20s. 6d. for the higher grades. Four hundred and eighty piasters per oke is equal to about 9s. per lb. c.i.f. Market closed firm with buyers. To-day's exchange is 430 piasters for cheque per pound sterling, and \$0.92 for SMYPNA, June 5.—Early this week several buyers came 430 piasters for cheque per pound sterling, and \$0.92 for one Turkish paper pound. The arrivals in Smyrna to date are 1,700 cases, against 695 cases at same date last year.

Palm Oil has been selling at lower prices, Lagos changing hands in Liverpool at 57l. and softs at 54l. 15s. per ton.

PARALDEHYDE is easier, importers offering at from 5s. 6d

to 6s. per lb. on the spot, and to arrive 6s. c.i.f. is quoted Pepper continues dull, and black Singapore is easier, with sales at from 6\frac{3}{6}d. to 6\frac{1}{4}d. per lb. on the spot. Sales to arrive include July-September at 6 d. c.i.f. and August-October at $6 \frac{1}{8}d$. c.i.f. Lampong on the spot is 7d., Tellicherry $7 \frac{1}{2}d$., and Aleppy 7d. per lb. White pepper is also slightly easier, Muntok offering at $11 \frac{3}{4}d$. and July-September shipment at $11 \frac{1}{4}d$. c.i.f. Singapore is $11 \frac{1}{2}d$.

PIMENTO is dull of sale and easier at from 5d. to $5\frac{1}{4}d$.

per lb. on the spot.

PLATINUM.—The recent cut in the price in France to 33,000 fr. per kilo. induced another considerable reduction in the price here, but in the virtual absence of business the nominal quotation of 400s. per oz. is still well above buyers' views. The market now absolutely lacks control, and until fresh arrangements can be brought about in order to stay the feeling of weakness the market may yield further, especially in view of the slack state of the jewellery trades on either side of the Atlantic. Scrap-metal is practically unsaleable.
POTASH PERMANGANATE is selling at from 4s. 9d. to

5s. per lb. on the spot.

QUICKSILVER .- The demand having been tolerably well satisfied for the present, the tendency became easier at the opening of this week. About 201. per bottle has been ! bid for Italian, with sellers asking 20l. 10s., and even more. The leading importers so far do not seem keen in making concessions. Spanish is quoted about 21/. and

upward.

QUININE meets with a steady demand, with small sales of sulphate from dealers' hands at 4s. 8d. to 4s. 9d. per oz. Hydrochloride is quoted at 6s. 3d., which is considerably above the makers' price. Arrivals comprising 484,000 oz. quinine sulphate and 62,000 oz. quinine hydrochloride have taken place from Java.

SALICYLATES .- Salicylic acid is easier, B.P. offering at from 3s, 3d, to 3s, 5d, per lb., and at 3s, c.i.f. to arrive. Sodium salicylate is unchanged at 4s, 9d, to 5s, for

crystals and 4s. 6d. to 4s. 9d. for powder.

SHELLAC.—The spot market is 10s, per cwt. higher, with sales of usual standard TN Orange quality at from 620s. to 630s, per cwt., with 640s. asked. AC Garnet, cakey to blocky, is quoted at 590s., and IG 540s.; fine Orange is 750s. and pure button 900s. The forward market, which closed barely steady last week, has since shown an advance of 15s. to 30s. per cwt.; sales include August delivery at from 605s. to 640s, to 632s. 6d., and October delivery 550s. to 580s. to 575s.

The shipments from Calcutta during the first half of June (including button lac) were: To U.K., 2,000 cwt.; to U.S.A., 26,000 cwt.; to the Continent, 600 cwt., making the total for the fortnight 29,200 cwt., against 11,200 cwt. for the

corresponding period of 1919.

SILVER NITRATE is dearer, in sympathy with the metal. The following prices for crystals are based on the metal price of $52\frac{1}{2}d$. per oz. on June 22: In quantities of 25 oz., 3s. $2\frac{1}{2}d$. per oz.; 50 oz., 3s. 2d.; 100 oz., 3s. $1\frac{1}{2}d$.; 250 oz., 3s. 1d.; 500 oz., 3s. $0\frac{1}{2}d$.

SULPHONAL is about 1s. per lb. cheaper, importers offer-

ing at 47s. to 48s. per lb.

TARTARIC ACID is unaltered at 4s, per lb. for powder and 4s. 1d. for crystals, the latter being in comparatively short supply.

THYMOL ex Spanish thyme oil is quoted to arrive in July at 48s. per lb., and August 48s. 6d. to 49s. per lb. The spot price is about 55s. per lb. ex ajowan-seed.

Tonka Beans.—In the absence of demand and fair spot stocks, easier prices are quoted for Angostura, which offer at 6s. 9d. to 7s. for ordinary to bold frosted. Paras offer at 2s. 9d. and fair black at 2s. 3d. per lb.

VANILIN is easier, with spot sales at 76s. per lb.

Wood OIL.—New supplies of Hong Kong have been selling at from 120s. down to 112s., but Hankow description is maintained at about 122s. 6d. per cwt.

Essential Oils Market.

THERE is no sign that the dull period through which the essential-oil trade, in common with several other industries of the country, is passing, is nearing an end, and indeed the general opinion appears to be that for some months yet the depression is likely to continue. Prices still recede, but the lower levels at which quotations are being made has had little effect in inducing buyers to come forward, except for urgent requirements. Forward quotations for certain articles show considerable irregularity, and for these it is difficult to give adequate ideas of value until more settled conditions prevail. Star anise, lemongrass, and Spanish spike are easier, and lower quotations are given for bergamot, caraway, clove, African and Bourbon geranium, fennel, lemon. Paraguayan petitgrain, Ceylon and Java citronella, orange and thyme oils.

ANISE.—Star remains quiet and easier, "Red Ship" brand

BERGAMOT.—For forward shipment lower prices have been quoted at the source, and 33s, to 38s, per lb. has been given as the price for 37.58 per cent. l.a. On the spot there are sellers at 34s, to 36s, per lb.

Sellers at 34s. to 36s. per lb.

Calauts is unchanged at about 44s. per lb. on the spot.

Camphon.—Japanese essential is selling at from 150s.

to 160s. per cwt. for brown and 175s. for white in cases; repacked in drums 185s. to 190s. per cwt. is the price. A low-gravity product (s.g. 1.000) is obtainable at 140s. to 150s., according to quantity. Owing to heavy losses by leakage from second-hand tins, this oil is unsatisfactory to handle, and importers are less inclined to bring supplies forward on this account. As has already been mentioned in these columns, consumers are well advised to pay the extra cost for repacking in drums. extra cost for repacking in drums.

Cananga is steady at from 24s. to 25s. per lb. for spot.

Caraway is lower at about 10s. per lb. for crude and 11s. for redistilled being mentioned in one direction.

Cinnamon (Lear).—There is little demand at present, and the price is unchanged at 10d. to 11d. per oz. for Ceylon.

the price is unchanged at 10d. to 11d. per oz. for Ceylon. CTRONELLA.—Very little business appears to be passing, and spot Ceylon is lower on spot at 3s. 5d. to 3s. 6d. per lb. Java oil is about 5s. 8d. to 5s. 9d. on spot, landing at 5s. 6d. Forward quotations appear to be higher at from 5s. 9d. to

CLOVE is easier, English distilled offering at 17s. per lb., although in second-hands 16s. would be accepted.

CORLANDER is in good supply on spot, and 10s. per oz.

CORLANDER is in good supply on spot, and 10s. per 0z. appears to be the value.

Cubeb is a scarce article at 60s. per lb. for spot.

Euchlyffus.—The London spot market is still cheaper than primary sources, with B.P. oil obtainable at from 2s. 6d. to 2s. 9d. per lb., according to quantity. It is reported from Tasmania that high-grade oil cannot be distilled under 3s. to 3s. 3d. per lb. c.if, terms. An arrival of 401 cases has taken place to London.

FENNEL.—Spanish is lower at 11s. 6d. per lb. for sweet: bitter is unchanged at 5s. 3d.

Geranium.—African and Bourbon are lower; for forward shipment the price mentioned is about 40s. per lb., and the spot value is given as from 40s. to 42s.

spot value is given as from 40s. to 42s.

Ginger is irregular, but the spot price appears to be in the neighbourhood of 46s. per lb., although higher prices have been mentioned.

GINGERGRASS appears to have been in demand, and spot prices are nominal at 20s. per lb., dealers expressing the opinion that if supplies were available higher prices would be paid.

JUNIPER-BERRY, B.P.—Dutch distilled oil is quoted at 19s. per lb. for spot. For Spanish 17s. 6d. is given as the price. Juniper-wood oil on spot is offered at 5s. per lb.

LEMON is easier at from 7s. 6d. to 8s. per lb. on the spot and 7s. 6d. to 8s. c.i.f. to arrive, although lower offers for forward shipment appear to have been made.

LEMONGRASS is neglected, and nominal quotations are given at from 1s, 1d. to 1s. 2d. per oz.

Orange.—Calabrian, sweet, is easier at 48s. to 50s. per lb. on spot, and bitter at 30s. to 32s. Spanish is lower at 28s., and redistilled at 31s.

Petitgrain.—Paraguayan appears to be irregular, but the

general tendency is downwards. Spot holders are quoting from 30s. to 32s. per lb., but even lower prices have been mentioned. Forward shipment is lower at from 26s. to 27s. Spike is casier at 12s. 6d. to 13s. per lb, for Spanish.

Valerian.—No demand appears to have been experienced later and the price water dispenses and 25c.

lately, and the price quoted is unchanged at 25s.

German Drug and Chemical Markets.

The market report dated middle of June of a leading Hamburg wholesal drug-house begins with the statement that the drug and chemical markets show a distorted pic-ture, and it is impossible to speak of stable market prices. With some articles there is a difference running into several with some articles there is a difference running into several hundred marks per kilogram between the prices quoted by manufacturers and the quotations of dealers, and, again, among the latter a distinction must be made between optimists, pessimists, and voluntary and compulsory sellers, while there are also strictly conservative dealers who still cling to their stocks and their old prices. In the present circumstances one feature is very apparent, and that is that the existing prices which in many instances careful stables. the existing prices, which in many instances are far below the actual cost price paid, are having a strong attraction for foreign buyers, and, further, that manufacturers are to some extent buying up their own products. Before and since the elections the rate of the mark varied considerably, and these fluctuations impress upon all business a character of unsettledness and uncertainty, quite apart from the practical impossibility of establishing a correct ratio between practical impossibility of establishing a correct ratio between cost price and sale price. The question is now becoming acute whether it would not be more favourable to the development of German economic conditions if, for the present at least, the value of the mark were not to appreciate largely. The increase in the value of the mark has paralysed the whole of the German export trade, without which the country cannot exist. During the period of the steady decline in the value of the mark German, commerce and industry avoided the use of representations. and industry avoided the use of paper money, and adopted on an increasing scale a standard based on the value of on an increasing scale a standard bysed on the value of goods, and if there is no market for these goods it is impossible to stabilise the mark, a course urgently needed in order to place conditions on a stable basis. The following quotations are in marks per kilo.:

ACETANILIDE.—Overstocked speculators who have been compelled to sell have caused the price to fall to m.50, which makes it worthy of attention, as the manufacturers' price is double this quotation.

ACETIC ACID (80 per cent.) is very firm at m.15, with a rising tendency, as the demand exceeds the supply.

ACETYLSALICYLIC ACID is cheap at its present low price of

Ammonium Bromide has declined to m.70, at which price it is worthy of attention. Foreign buyers are interested.

Angelica-root is available in limited quantities at m.25 gross for net.

ANTIPYRIN is obtainable on the spot at m.300, a lower

rate than charged by the makers.

ASPIRIN.—Supplies of genuine are fairly scanty, and there is a large demand by foreign buyers.

BENZALDEHYDE, almost free from chlorine, has declined to m.150 since factory supplies are coming in more plentifully.

BENZALTES.—Benzoic acid has dropped to m.78, but supplies are much scarcer than those of sodium benzoate, which is being offered by dealers at m.65, which is below factory

BISMUTH SUBNITRATE is cheaper at m.425, also bismuth sub-

gallate at m.375, but supplies are somewhat scarce.

Borax.—The demand has decreased in view of the slackness in industrial centres; on the other hand, there are no fresh supplies offered. Crystals are lower at m.11.50 and powder at m.12.

Boric Acid has dropped to m.20, but is very scarce. CAFFEINE.—Pure is very firm at m.900 owing to stocks being largely depleted and no fresh supplies from manufacturers coming in. Caffeinc sodio-benzoate and caffeine sodio-salicylate are both firm at m.700 owing to scarcity

supplies.

CAMPHOR (REFINED) has dropped from its highest quotation of m.825 to m.275, entailing heavy losses to holders.

CITRIC ACID.—Stocks are very low; no supplies from makers are forthcoming, and no imports are permitted, consequently it is very firm at m.130.

COUMARIN is in demand by foreign buyers at the old price

CREAM OF TARTAR (99/100 per cent.) has dropped to m.50.

Supplies are somewhat scarce. ERGOT is obtainable in limited quantities at m.580.

FRANGULA-BARK is in demand by home as well as foreign buyers at m.12.50.

GENTIAN is obtainable at m.15.

GLYCERIN has a very firm tendency at m.32, as supplies by manufacturers as well as by dealers are negligible.

HELIOTROPIN has declined to m.700, and is scarce.

HEXAMETHYLENETETRAMINE is finding attention by foreign

buyers at m.230. HYDROQUINONE is obtainable at m.140 on the Hamburg market, cheaper than offered by makers.

IPECACUANHA.—Rio is in demand at m.500.

Spanish Thyme.

In a recent issue (C. & D., June 12, p. 58) reference was made to the arrival in England of the plant which yields oil of thyme, from which thymol is manufactured. This has been identified by Mr. E. M. Holmes as Thymus lygis, Linn., which is used as a condiment in Spain and known there as Tomillo salsero.

Java Quinine.

The "Preanger Bode" reports that it is probable that the so-called Van Leersum process for the preparation of quinine will be adopted on an extensive scale. This is all the more likely, since the quinine contract provides for the delivery of crude quinine in the place of bark, and several large undertakings are proposing to undertake the manufacture of crude quinine. This journal learns that instead of receiving 25 per cent, of the profits derived from the use of his process, as originally stipulated, Heer Van Leersum has agreed to accept 10 per cent., and this concession on his part is likely to improve the prospects of the adoption of his method of producing quinine.

Swiss Dye Developments.

Swiss dye producers, says the "Manchester Guardian," are co-operating under an agreement made during the war are co-operating under an agreement made during the war by which they pool their profits. This colour "ring" is composed of the Society of Chemical Industry, the Sandoz Chemical Works, and the Geigy Chemical Works—all of Basle. They have recently purchased the establishment of Ault & Wiborg, a dye-products factory in Cincinnati, Ohio. The transactions for the purchase were begun in December 1919, and have only recently been concluded. This deal involves an amount exceeding 25,000,000fr. (1,000,000L). A committee of directors of these three factories, comprising Dr. Brodeck (of the Society of Chemical Industry), Mr. Wagner (of Sandoz Chemical Works), Dr. Koechlin and Mr. Misslin (of Geigy Chemical Works), is leaving for America to complete arrangements. It is stated that the "ring" is now negotiating for the purchase of some big works in or near London, which it is intended to transform into a dye or near London, which it is intended to transform into a dve

Spanish Olive Oil Crop.

It appears from statistics furnished to the Spanish Agricultural Production Committee by the provincial Agronomical Offices that the last olive harvest amounted to 17,968,108 metric quintals, representing approximately a yield of 3,338,540 metric quintals of olive oil—a considerable increase on the production of the previous year, which was 14,038,314 metric quintals of olives and 2,552,023 of olive oil. 14,000,014 metric quintais of onves and 2,002,020 of onve on. The yield is also considerably above the average of the last five years, having been exceeded only in that period by the production in the year 1917, one of the largest registered. The following provinces record the largest yields, in order as given: Jaen, Cordoba, Seville, Lerida, Valencia, Toledo, Chanada, Padaias, Towagon, and Husea. Granada, Badajos, Tarragona, and Huesca.

Japan and Cinchona.

It is reported from Java that a Japanese concern, with a capital of 5,000,000 florins, is taking steps to control a number of cinchona plantations, and to erect a second quinine factory on the island. It is even rumoured that Her P. van Leersum, the former director of the Government plantation, Tjinjiroean, has been invited to become a director of the new undertaking. The cinchona plantation of Sadaréhé in Cheribon has concluded a contract with the Quinine Factory in Japan for an annual supply of \$50,000 kilograms of bark, at a price of 9 to 10 cents per unit. This is the same ratio as enjoyed by those participating in the cinchona contract, but is more favourable owing to the fact that the latter suffer a slight deduction for freight, etc. for freight, etc.

British Synthetic Perfumes.

In an interesting article contributed to "The Times Trade Supplement," Mr. E. J. Parry, B.Sc., F.I.C., takes an optimistic view of the prospects which the future holds in store in the domain of synthetic perfumes. He states that there is no valid reason why the United Kingdom should not become one of the most important centres of the synthetic perfume industry. Mr. Parry is on the whole satisfied with "The Times not become one of the most important centres of the synthetic perfume industry. Mr. Parry is, on the whole, satisfied with the progress made by British manufacturers, but he points out that the output is still small and confined to a few articles. British perfumers to-day, he states, are dependent on foreign manufacturers for their synthetics, just as they were before the war. Two examples are given in the article showing the characteristic British habit of allowing foreigners to build up an industry from raw material furnished from the United Kingdom—the preparation of yanillin from oil of cloves and the manufacture of ignore vanillin from oil of cloves and the manufacture of ionone from citral, the chief constituent of lemongrass oil. Mr. Parry is emphatic in his belief that technical training of workmen is urgently needed, as well as cheouragement for the highly-skilled chemist, and voices the importance of chemistry as a motive force in national prosperity.

The German Mark.

The introduction which prefaces the German Market Report, which we publish elsewhere in this section, contains a paradoxical statement which throws an interesting light a paradoxical statement which throws an interesting light on the internal conditions of that country. While all other nations labouring under the disadvantages of an adverse rate of exchange are not neerly content with expressing academic views on the subject, but have taken active measures to improve the value of their currency, Germany actually views with dismay the appreciation which has actually views with dismay the appreciation which has recently taken place in the value of the mark, and envisages the possibility of this improvement leading to general disaster. Truly a surprising development! The catastrophic depreciation in the value of the mark, combined with the soaring prices of all commodities and the pressure brought to bear by workers of all classes, resulted in everincreasing demands for rises in wages and salaries, quite apart from the corollary increases in freights, travelling, postal rates (a postard from abroad now costs 40 pfennigs postar rates (a postard from abroad now costs to premings = 5d.), etc., and had enhanced prices to such an extent that the general public for some time past has confined its purchases to absolute necessities, so that business has practically stagnated. On the other hand, manufacturers who had purchased raw materials, or had entered into contracts for their supply, at a time when the mark was worth about half its present value, are confronted with the impossibility of disposing of their goods, the actual cost price of which is far above their present market value, in consequence of the enhanced value of the mark. Now that prices are declining, the workers show no inclination to readjust their remuneration to the altered circumstances; hence the cost of production remains excessively high. The result is illuminating. Germany, once the country of low prices and the exponent of "dumping," now quotes higher prices than its former competitors, and contemplates with anxiety this threat to its whole export trade, upon which so many hopes for the reconstruction of the Fatherland are based.



Letters for this section should be written on one side of the paper only. The writer may adopt an assumed name 'or purposes of publication, but he must in all cases furnish his real name and address to the Editor.

The Dangerous Drugs Bill.

Sir,—The necessity of records of sales under the Dangerous Drugs Bill is a useless imposition in the case of registered pharmacists, who already have their poison and prescription books to deal with registered poisons. The only favourable clause in the Bill is that which presumably ensures that a prescription containing morphine, cocaine, etc., shall not be repeated without endorsement or renewal by the doctor, as in some cases the customer obtained unlimited supplies by going to various pharmacies, and again such prescriptions are sometimes lent to friends. This should, of course, be stopped. With regard to illegal sales, this does not apply to pharmacists, as such sales are generally effected by West End touts and other disreputable persons, who always seem able to obtain a supply and would continue to evade the law in any case if they could. For this reason the pharmacist is, forsooth, to be penalised for every little sale of paregoric, or cough mixture containing minute percentages of morphine "or any other such drug as the Home Office may decide." If this latter clause is passed there is no limit to their power under the Bill, and the Pharmaceutical Society becomes obsolete, Yours faithfully,

O. P. M. (18/2.)

Wages in the Drug-trade.

SIR,-I am glad to know that there are others beside myself who are beginning to realise that salaries must be valued by their "larder equivalents," and I must compliment "Scotus" on his insight and able way of handling hard facts. I am pleased, also, that your correspondent "Fair Play" has made a strong point in his letter concerning cheap labour and the cheap results ensuing, about which I spoke in your columns some few weeks ago. As for "Festina Lente," he is hopeless. I do not know, of course, whether he employs a qualified man or not, but if he does it would perhaps pay him to set himself the little problem of working out how any man is to keep himself and family respectable and at full working efficiency on the salaries that "Scotus mentions as excellent, and with which he agrees. Bevin's poverty line was somewhere in the neighbour-hood of 5l. 10s., this for a docker; and his figures were cast-iron correct. Why, friend "Anglo," I pay over 3l. a week to my grocer and butcher, etc., for food alone, and the missus bakes her own bread at that. I threatened one man with a thick lip for offering me 41. 10s. a week just after leaving the Army. I regarded it then, and do to-day, as an insult. Possibly the south of England conditions may be easier than north of Tweed; maybe the assistant may be able to earn extra money in his spare time by doing a little boot-cobbling, etc., or his wife be able to take in a little washing or charing; it's a fact the poor devil and his family will have to go pinch bellied and clad in rags on the pittance referred to. I can only repeat what I have said before—that justice always leads duty, and that good service demands good pay. If a man desires assistance he must be prepared to pay for it, and if returns and profits do not permit due payment they must be increased till they do, or the man must plough his furrow alone. Yours faithfully,

MASAID. (63/6.)

SIR,-Almost as though commenting upon your correspondent "Anglo's" statement (C. & D., June 12, p. 75), that shop assistants consider 3l. 10s. to 4l. excellent remuneration, the drapers' assistants have just put for-

ward a wages programme ranging from 4l, 15s. to 6l. weekly. In many shops they also get a commission ou sales, in some cases amounting to another pound a week; and taking into consideration the shorter hours, no holiday work, no responsibility as in the case of handling drugs, and no scientific education or expensive examination to commence with, there is no comparison between such remuneration and that of a chemist's assistant. "Anglo also suggests that employés should stop company trading in pharmacy, but he omits to mention who was responsible for its inauguration, and that it could have been stifled at its commencement by a strong society. If the former generation of pharmacists were content to lose their birthright, there is no reason why the future one should suffer for it, and in the present time of general upheaval, if pharmacists are not prepared to advance with modern conditions, they will automatically disappear.

Yours faithfully, JACOB. (12/6.)

SIR,—Regarding the 850*l*, business mentioned by "Anglo" (*C. & D.*, June 12, p. 75), where purchaser's income is 4*l*. 10s. per week, I presume he works himself as well as his assistant. If so, I should say one qualified man ought to be able to manage a business of that description; but if he only draws profits without work, I should think 4l. 10s. a week a good interest for his 850l. "Anglo's" own business is evidently overnis observables of the large staffed, to allow him only 30s. per week on the 7l. nominal wage. There is too much talk among pharmacists of "cannot pay" adequate salaries. The average business has increased at least 150 per cent. during the war, without increased staff, and in a number of instances with less. Who gets the increased profits? Not the employé. The employer can certainly increase his rates of profit, as in the Profiteering Act working expenses. are taken into account. If chemists will cut prices, why should the employé be the sufferer? If a minimum salary, say, of 7l. was enforced, 'would "Anglo" say he cannot pay? He would either have to accept or go without. A 3l. salary in 1914 should now be represented by 7l. 10s., taking into account the Board of Trade's 150 per cent. taking into account increase in cost of living.

Yours faithfully,

CARDIAC. (14/6.)

Pharmacy Teachers' Remuneration.

SIR,—In reply to Mr. Kenneth S. Dickinson's letter (C. & D., June 19, p. 62), I should like to give a few pros and cons of the "one man for everything" system of teaching. I have studied under both the professional and the one-man styles. In the first I had as chemistry lecturer a man whose name was connected with important chemical research and discovery, and who probably knew as much about the subject as anyone of his day, but as a teacher of students he was useless, and I used to leave the lecture-room in a fogged condition. Further, such a leading man was seldom approachable in the laboratory, as there were demonstrators for this purpose, but as these demonstrators were also working for further qualifications of their own at the same time, students were looked on as a nuisance if they were too inquiring. Another defect which I found in the professional system when applied to pharmaceutical training was that many items were on the border-line between chemistry, pharmacy, and materia medica, and each lecturer in turn left these items severely alone, for fear of encroaching on his colleagues' ground; consequently certain parts of the work were never covered at all. Unfortunately, I did not discover this until my appearance at Galen Place, when the first question I was asked related to one of these items, and I suffered in consequence. It is doubtless an ideal condition that each subject should be taught by an expert, but in pharmacy the subjects are so closely interwoven that it is difficult to draw the line. In how many chemistry classes at a technical school would you study the reactions involved in making such products as acid. sulph. aromat., glyc. ac. boric., hydrarg. oleas, etc.; and if you had a pharmacist to teach pure pharmacy and nothing else, would he consider such work included in his sphere? At any rate, in my own experience professorial tuition ended in failure

and one-man teaching led to success. You may say that I had already received the groundwork of success under the professors. Possibly so, but it was a mixture of heterogeneous knowledge which I was unable to reproduce when required, whereas under the one-man system that knowledge was "pelmanised" into co-ordinated facts which enabled me to satisfy the examiners. My opinion is that the subdivided training is very suitable for the man who has time and means, or who looks on his pharmaceutical examination as a stepping stone to further qualifications or research, but for the man who has to pay his way out of his savings, and wishes to qualify to earn his living, let him go to a one-man school that exists by results. Possibly the perfect method would be to insist that every apprentice should pass the Preliminary first, and then start right off attending chemistry and botany lectures under teachers of the pure subjects, and on attaining proficiency in these could then go on to the teacher of pharmacy, who would combine the subjects as required. Yours faithfully, COMBINED BATH. (19/6.)

East Anglia Representation.

SIR,-There is no such thing as "territorial representation" on the Council of the Pharmaceutical Society, and we can only get it by special Act of Parliament, which we dare not ask for. The only substitute is to pack the Council with nominees from the federations and call it "territorial representation," which is nothing of the kind. Such being the case, there is no justification for the direct personal attack on a member of the Council residing in East Anglia, and, in my opinion, it is not for Mr. Body but for the Federation to determine whether we are represented by the present members, or Mr. Body, or both. The ultimate decision will rest with all the members of the Society at the Council Election next May. They might send both to the Council; why not? Cannot we all pull together?

EAST ANGLIAN PHARMACIST. (22/6.)

The Lure of the Orient.

SIR,-With regard to Mr. Saunders' query in his interesting letter from Singapore (C. & D., June 5, p. 91) as to why more assistants do not apply for colonial jobs, may 1, as one who in pre-war days has had considerable experience of colonial business both at home and abroad, offer a possible explanation of the hesitation of men in accepting these berths? In pre-war days, at any rate, the salarics offered, although appearing large to an assistant accustomed to English wages and cost of living, were very small when taken in conjunction with colonial prices, and in many instances smaller than those paid to men on the spot; and by a reference to a recent "Supplement" under "Colonial Situations Vacant" the figures offered do not seem to have advanced in anything like the proportion they should have done, or the proportion they have done at home. Further, men who were engaged for a coast town or healthy neighbourhood a few weeks after arrival often found themselves transferred to an up-country branch, where the conditions were very primitive and unhealthy; an assistant, as a rule, had no means at his disposal to dispute this, and if he objected would be informed that he had broken his agreement, and in the event of refusal to comply would find himself strandel. with a big fare to pay to get home. With reference to fares, although the advertisements usually state "fare paid out and home." this is really deducted from salary by a lower rate of payment for the first and second year. Another item given as an attraction used to be free quarters; in many instances this consisted of a room or cubicle at the back of the pharmacy, with a camp-bed and little else. As to the plums, I think there is little difference between the opportunities at home and abroad; in my own experience I was appointed manager of a branch within six months of landing, and although the turnover increased considerably the only benefit I received was better living accommodation; pccuniarily I was referred to the salary stated in my agreement, and by judicious inquiry I learned that if a man got too pushing it was considered cheaper to get a new one out from home. To

take a holiday in the old country, say every three years, would swamp most of one's savings, as these holidays are not paid for, unless a man is fortunate or insistent enough to get a claim in his agreement to that effect. On the other hand, I certainly agree with Mr. Saunders that a trip abroad broadens the mind, gives a liberal outlook on life and more experience, and if taken as an interlude or as part of one's education such an experience is beneficial, and of course there is the hundred-to-one chance of picking Yours faithfully, up something good. PRE-WAR COLONIAL. (5/6.)

Miscellaneous Inquiries.

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

L. L. (8/6).—Pricing Prescription.—The large quantity of codein in the prescription you send makes it necessary to apply the costing method according to the London List, on a 1-oz. buying basis, and the price would be:

| | | s. | d. |
|---------------------------|--------|----|----|
| Codein, 45 gr | | 8 | 2 |
| Ext. nucis vom., 15 gr. | | 0 | 1 |
| Ext. cascara sag., 20 gr. | × | 0 | 2 |
| Dispensing-fee | `, | 1 | 3 |
| - | | _ | |
| | | 9 | 8 |

It is usual to allow 10 per cent. on quantities of drugs exceeding 5s. in selling-price, but, in view of this being a case where credit has to be given, we do not think this should be done unless you have reasons to the contrary.

H. H. (12/6).—POWDER FOR CAT.—You do not mention the kind of powder, but the following will act generally as an alterative, condition, and tonic powder:

| Hyd. c. ciet | | gr. ij. |
|-------------------|---------|---------|
| Pulv. aloes barb. | | gr. j. |
| Potas. nitrat., | | |
| Antim. sulph. | aa. | gr. ij. |
| Pulv. capsici | | gr. ij. |
| Pulv. gentian | | gr. v. |
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Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," June 15, 1870.

Pnarmaey in France.

Pharmaey in France.

Let us consider awhile the comparative relation of the French élève with his patron. He leaves college, and passes his degree as Bachelier des Lettres at the nearest academical town, finds an enlightened pharmacien willing to board, lodge, and even pay him for his services during the three or four years he is studying for his final examinations, and emerges a full-blown druggist at twenty-five, generally conserving excellent relations with his patron, whom in many cases he succeeds. Then, the comparative relationship of the pharmacien with his French clients stands out boldly in contrast with the kind of social mal cutendu reigning in England between chemists and their customers. He boldly in contrast with the kind of social mal entendu reigning in England between chemists and their customers. He has in all nations, and in all times, been a butt for the superabundant sarcasm of people with healthy digestions. Molière made fun of him, so did Shakespeare. Let us take their jokes for what they are worth. If Molière had had the colic, would he not, after the manner of his people, have had recourse to the inevitable lavement, and blessed the apothecary armed with the classical squirt? Perhaps he nad recourse to the inevitable tarement, and diessed the apothecary armed with the classical squirt? Perhaps he had it, and ungratefully reviled (still after the manner of his people) his quondam benefactor, whose bill appears to have been rather extensive. But one can only afford to quarrel with one's doctor when well, and not when in need

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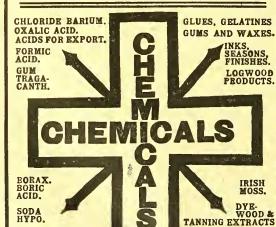
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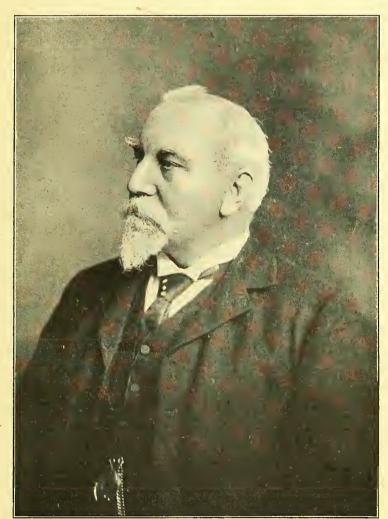
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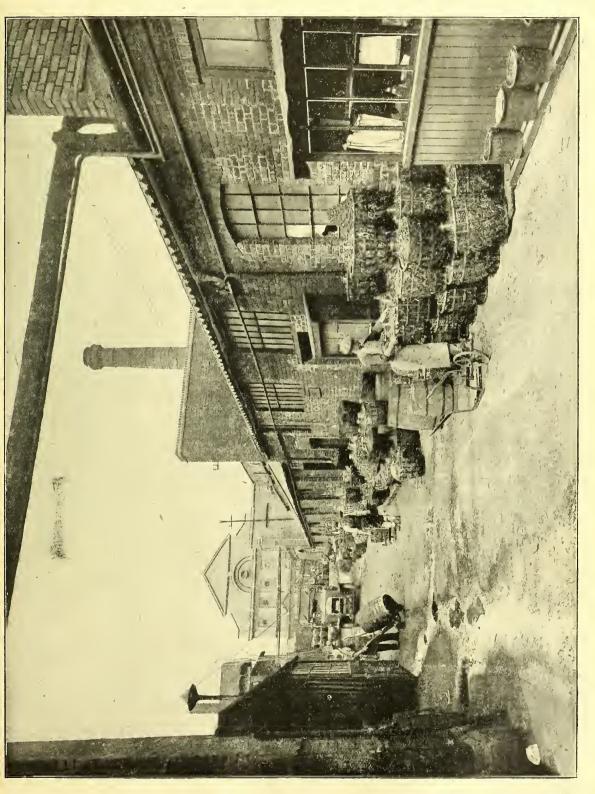
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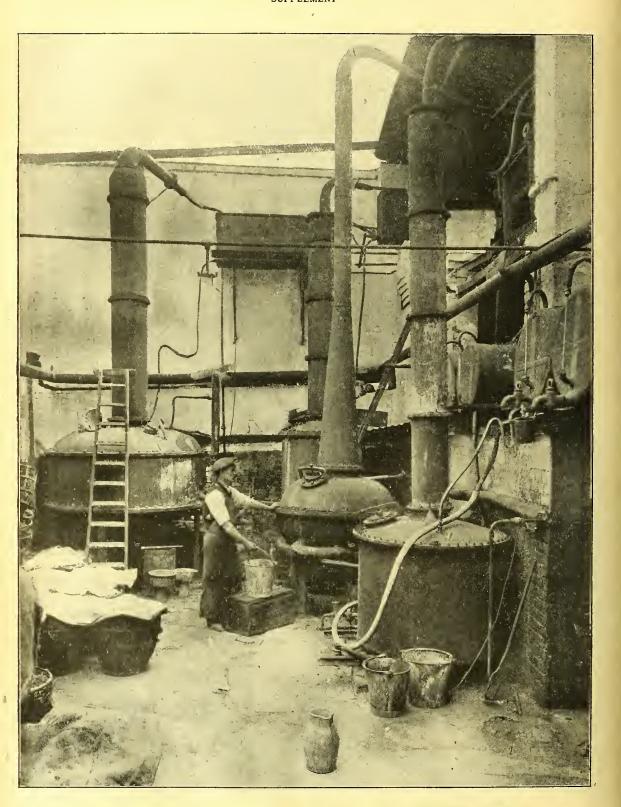
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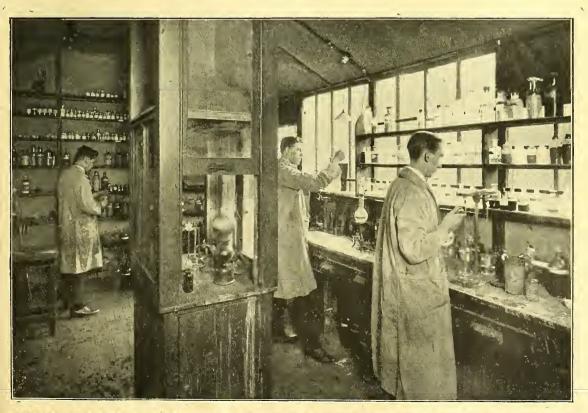


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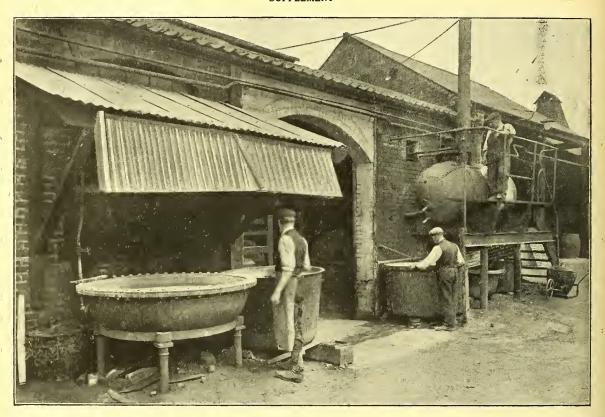


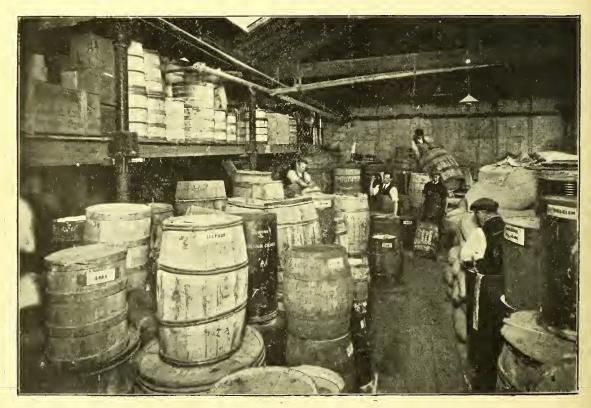
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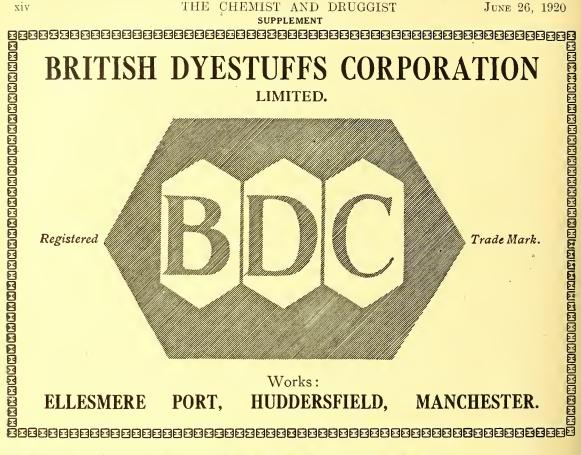
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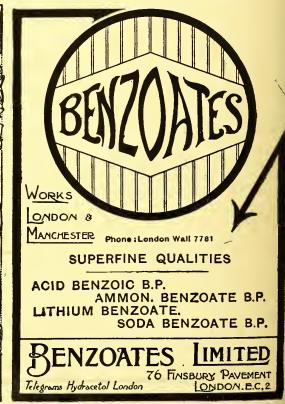
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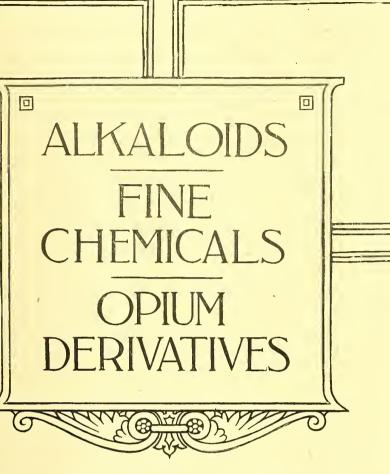
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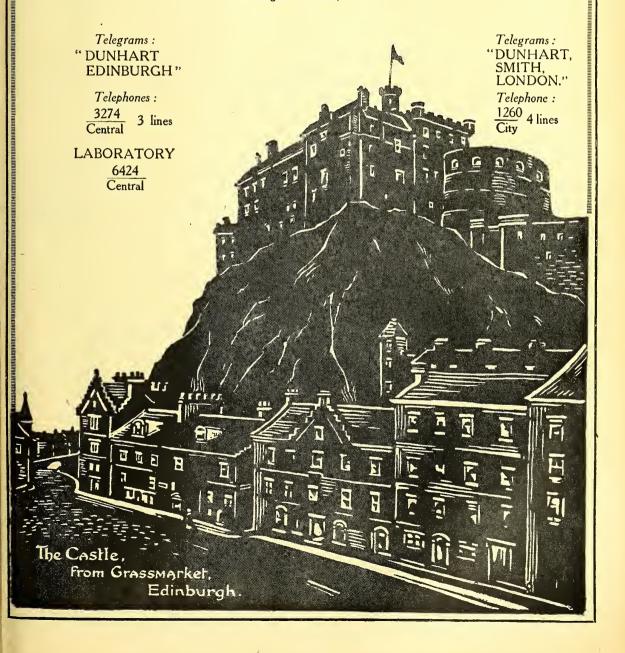
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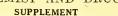
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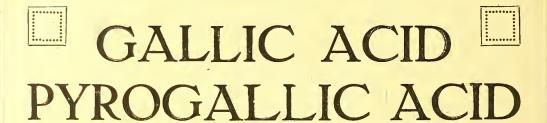


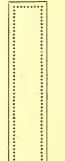
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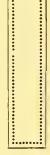




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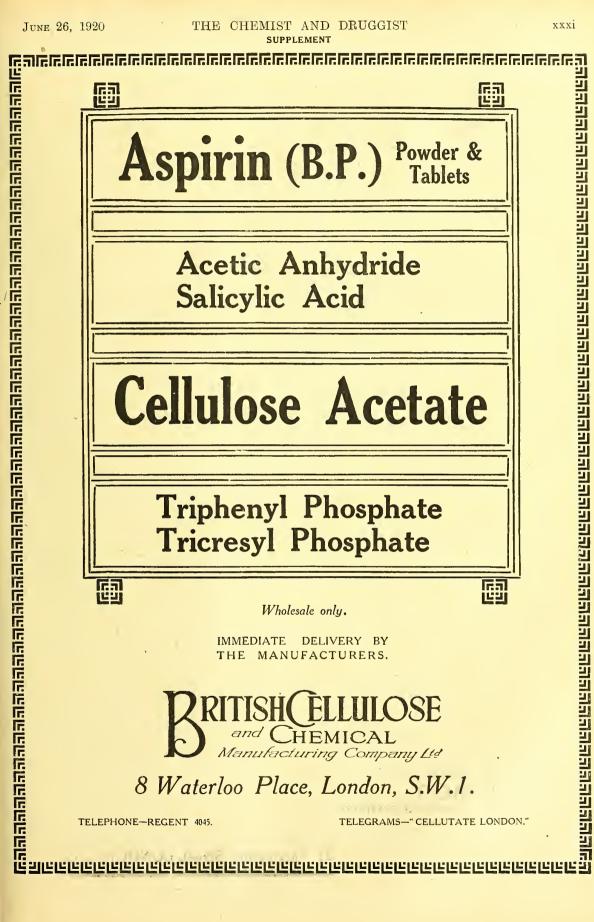
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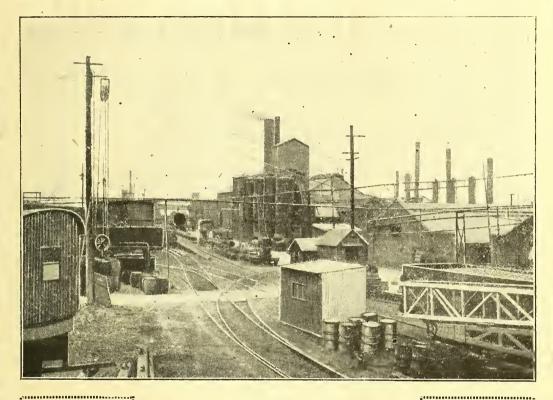
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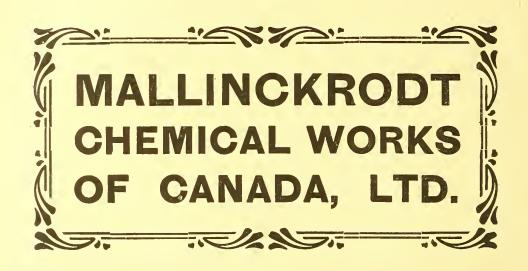
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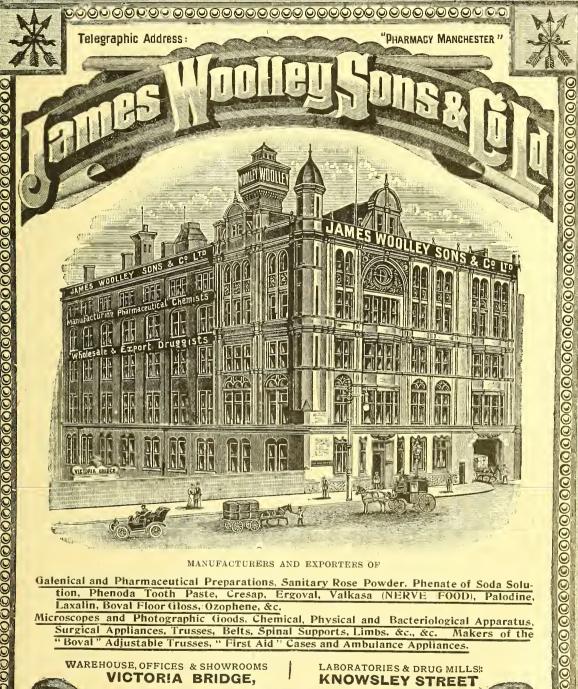
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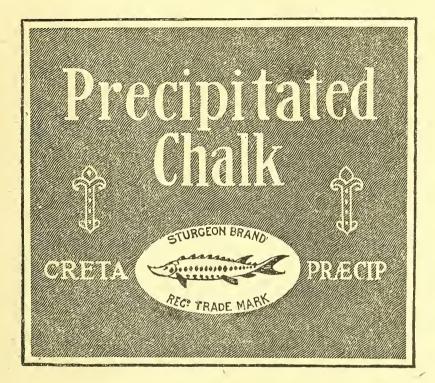
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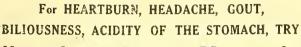
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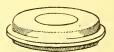


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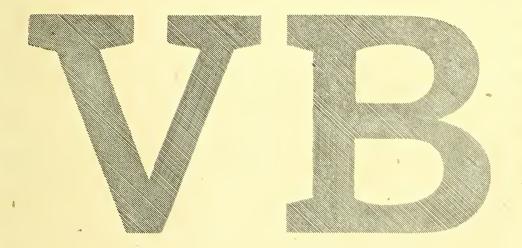
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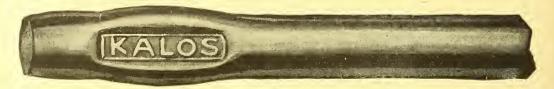


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Average over 7000 to pound.

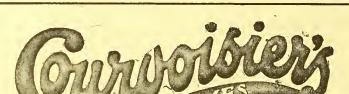
Quantity. ½ grain 330. ½ grain 330. 4 grain 330 1-lb. 47/-35/-28/- lb. 7-lb. 34/-27/-14-lb. 45/-33/-26/-100's boxes 9 6 6/-doz. 7/6 **2**00's 17/-14/-Less 6d. per doz. in gross lots.

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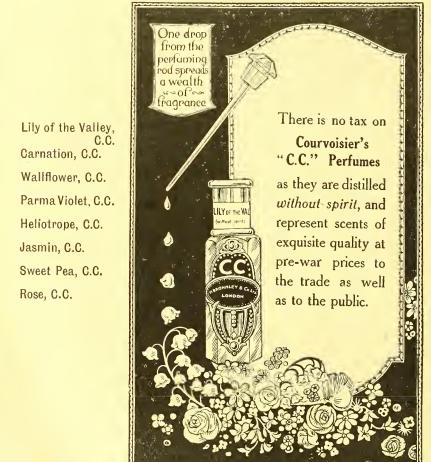
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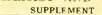
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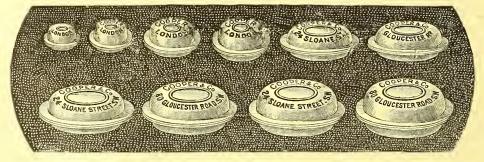
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Easton

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Aloin Compd.
Ammon. Brom. gr. 5
Barbitone gr. 5
Bismuth Carb.
Bismuth Carb.
Bismuth Subnit.
Bismuth Carb. & Sodii Bicarb.
Bismuth Arbeit Bicarb. and
Zingib.
Blaud (pink or white)
Blaud et Aloin
Blaud, Arsen., Strychnine
Caffein. Cit.
Caffein., Antipyrin.
Calcium Lactate
Calc. Sulph. (pink complexion tablets)
Cascara Comp.
Cascara Sag.
Chemical Food
Compound Quinine
Digestive
Dyspepsia

Ergotin Ergotin -Co. (chocolate coated) Formalin Mint Ginger Mint, B.P.C. Guaiacol Carb. Hexamine Hyd. c. Creta Hyd. c. Creta & Ipecac. Co. Hyd. Subchlor. Hyd. Perchlor. Hypophosphit. Comp.
Ipecac. Co.
Laxative Vegetable
Lithia Cit. Morphin. Sulph. or Hydroch. Methylsulphonal Pancreatin Pepsin B.P. Peptonising Tablets Phenacetin gr. 5 Phenacetin B.P.C. (pink or white) Phenacetin Co. (pink or Phenacetin Co. B.P.C.

Phenolphthalein Pine Pot. Bicarb. Pot. Bromid. Pot. Chlor.
Pot. Chlor. Co. (voice)
Quinine Bisulph. (coated or uncoated) Quinine Hydrobrom. Quinine Sulph. (coated or uncoated) Quinine Ammoniat. Quinine and Iron Quinine and Cinnamon Rhei E. I P. Rhei Co. Saccharin Salicin Salol Sodii Bicarb. Soda Mint Soda Salicyl. Sulphonal Thyroid Gland Trinitrin Trinitrin B.P. Veronal (Barbitone)

All the above can be supplied in bulk or packed for the retail trade with the chemist's name if desired, and special prices will be quoted for large buyers.

We think we can with justice pride ourselves upon the quality of our Compressed Medicinal Tablets, having availed ourselves of the most up-to-date scientific tabletting machinery which we have recently installed. Under expert supervision the resultant products, we are confident, will satisfy the most exacting pharmacist.

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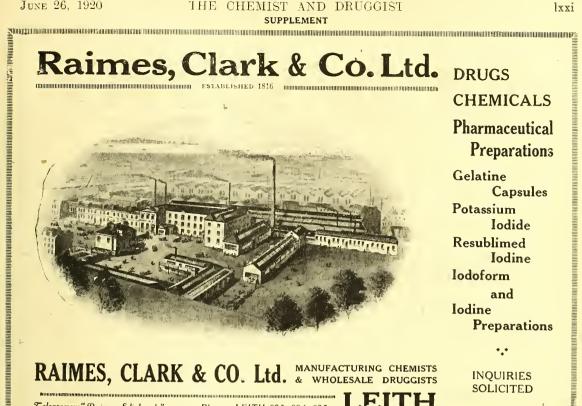
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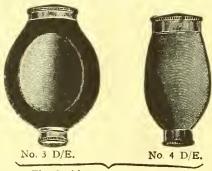
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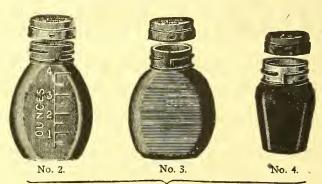
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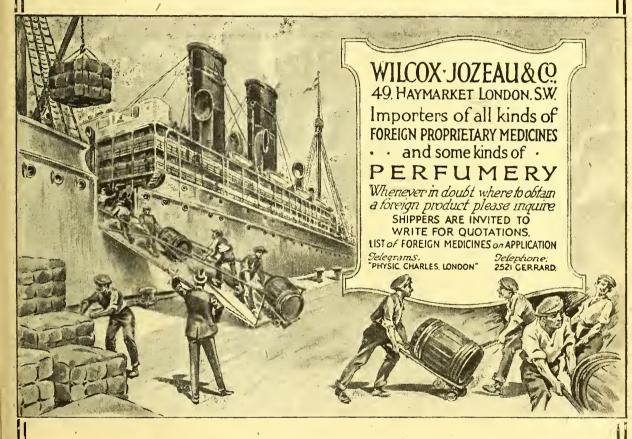
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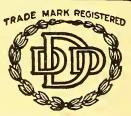
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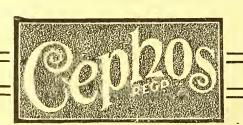
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D.D.D. VANISHING CREAM. 2/6 per jar, M.R.P. Face Value, 22/6 per doz.
D.D.D. SHAMPOO POWDERS. 2/6 per box of 10 powders., M.R.P. Face Value, 22/6 per doz.

SPECIAL 5% for 7 days on orders of £5 and over.

DISPLAY TERMS. 10% for 14 days on orders of £10 and over.

SHOWCARDS, etc., supplied free.

D.D.D. CO., Ltd., 3 Fleet Lane, Ludgate Circus, London, E.C.4



for
Neuralgia
Headache
Rheumatism
Influenza

WRITE FOR WHOLESALE TERMS.

CEPHOS LTD.,
Blackburn, Lancs.

"SEPTAX

SPONGE CLEANSER

Sponges cleaned while you wait.

Absolutely reliable.

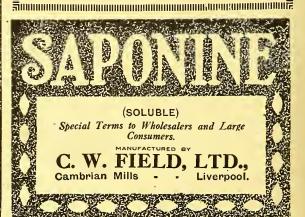
In Boxes Retail - 9/- per dozen - 1/- each

Sufficient in each box for 3 ordinary sponges.

British Depot:

A. R. ANDREW.

6 LOVE LANE, WOOD ST., E.C.2



Musterole Brings Quick Relief.

The remarkable quickness with which Miller's Musterole relieves pains and aches will make many a friend for you. Musterole does all the work of the old-fashioned mustard plaster—does it better and does not blister.

Miller's Musterole is a clean, white ointment, made with oil of mustard. Put up in a handy white jar for immediate use, it is used and recommended by many doctors and nurses.

For sore throat, colds, headaches—for many other ailments, Musterole is the most reliable remedy you can put on your shelf. Advertising in the press of the United Kingdom is carrying the Musterole message to your customers. Order a supply to-day. Prices and complete information on receipt of a card from you.

Thos. Christy & Co., 4-12 Old Swan Lane, London, E.C.4.





25% PROFIT

(P.A.T.A.)

Additional 5% on £2:0:0 orders, CARRIAGE PAID, cash with order, from your wholesale house or direct from the

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S O L E BRITISH AGENT:

MURPH

41 ST. ANN'S ROAD

LONDON, E. 3.

MACHON'S COMFORT

has for Forty Years been the Best & Safest Infants' Preservative.

COMFORTINE contains no Opiates or Dangerous Drugs whatever.

During teething it is a real Baby's friend.

PREPARED BY

Machon's Comfortine Ltd. Coalville, LEICESTER.

Fixed Minimum Price:

PER BOTTLE.



Saint-Raphael

Tonic, Restorative, Digestive Wine.

Known throughout the Werld, and prescribed in all cases of ANÆMIA, DEBILITY, and CON-VALESCENCE, to Young Wemen, Children and the Aged.

DOSE: One Wine-glass after the two principal Meals.

Recommended by—
PROF. BOUCHARDAT. Professor of Hygeae, Paris Faculty of Medicine.
DR. MACNAUGHTON JONES, London,
England.

England.

E. "For more than thirty years St. Raphaël Wine has been exclusively prescribed, with success, in the Paris hospitals as a pure tonic, by eminent physicians, such as Magendie Rostan Chomel, Velpeau, Requin, Monneret, Trousseau, Grisolle, Laënnec, &c."—Union Médicale, May 8 and June 12, 1873.

"The Vin de St. Raphaël is often used for ladies aursing their own children; it is preferable to stout, which creates an unhealthy fat."—The Lancet, London, England.
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"St. Raphaël Wine is most precious in all cases where it is necessary to give tone to the system, without effort or shock."—Dr. C. Dr. Barres.

Cle du VIN SAINT RAPHAEL, Valence. Drome, FRANCE.

> To be obtained from all Wholesale Druggists.

DAISY SALES are EASY SALES

And your profit is 50-100%

VERY customer who comes into your pharmacy knows Daisy as an old friend—27 years of continuous advertising has made Daisy known and trusted everywhere. Everyone who asks you for a headache or neuralgia cure has Daisy at the back of his mind, and simply to show him the box will make a profitable sale. Daisy is always half sold.

A great point about Daisy to-day is its wonderful VALUE—we pay FIVE TIMES as much as is usual for our ingredients, so the public get 550 % extra value for the extra ½d. they pay.

This point we are driving home in big advertisements in the country's most powerful papers—papers with a circulation exceeding

SEVEN MILLIONS PER WEEK

The "Sunday Pictorial," with its nearly three million readers; "The News of the World," with over three millions; "The Sunday Chronicle," with over a million; as well as the chief evening papers of Ireland and Scotland, will all carry this Daisy advertising regularly for the next six months.

A greater demand than ever for Daisy is certain—your customers will want it—and we shall be obliged if you will see that you have an adequate stock of this high-class, well-advertised, high-profit line.

Send us your order or write your wholesale house to-day.

1/- Packets each containing 8 Powders.—Minimum Retail Price, 1/-; Sample Powder, 2d. For not less than 1 doz. boxes, 9/9 per doz. For not less than 3 doz. boxes, 9/2 per doz.

2/3 Packets each containing 20 Powders.—Minimum Retail Price, 2/3. For not less than 1 doz. boxes, 21/6 per doz. For not less than 3 doz. boxes, 20/6 per doz.

Daisy Tablets, 1/3 Tins each containing 25 Tabs. 1 dozen tins, 13/- per dozen. 3 dozen tins, 12/6 per dozen.

Mixed Orders for 1/-, 2/3, 6/- size and for Daisy Tablets on best terms.

Discount $7\frac{1}{2}$ per cent. for cash. Carriage paid to Destination.

DAISY LTD., LEEDS.

SUPPLEMENT

Clarke's Blood Mixture.

WHOLESALE PRICES.

3/- size Clarke's Blood Mixture £1-7-0 per doz. £16-4-0 per gr. net. £64-16-0 ... £5-8-0 12/- ,,

> Orders: Minimum Quantity £16-4-0 Value Carriage paid upon orders of £100.

MINIMUM RETAIL SELLING PRICES 3/- and 12/-

Above prices will give a Profit of $33\frac{1}{3}\%$ on cost to the Distributors.

Sole Proprietors:

& MIDLAND COUNTIES' THE LINCOLN DRUG CO. LTD., PARK STREET, LINCOLN.



NASAL SPECIFIC

Look to your Stock!

BUY DIRECT on best terms.

Price: 1 doz. 11/9, 3 doz. 33/9, 1 gross 135/-



LIFTON BRISTOL

Tle up your Parcels with Advertising Tying Tape. Pleases both Eye and Pocket and gives Distinction to every Parcel sent out.

Various Colours and Widths. Printed or Plain.

Write for particulars when Prices and Patterns will be forwarded.

S. D. SIMOND & CO., I

10 Monument Street -

Telegrams: "Duncasim London. Tel.: Avenue 6378.

As supplied for many years to the leading Houses for Pills, Cachous, &c.

We also supply

GOLD LEAF AND GOLD POWDERS

WHOLESALE ONLY.

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TELEPHONE : Central 985.

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(Regd. Trade Mark)

Are delivered carefully packed in air-tight tins unless unsuitable or otherwise ordered.

Impalpable and absolutely uniform, are now The Standard of Quality.

Are manufactured to suit the climate in which they are to be used.

Always arrive in good condition. Are the lowest-priced ointments on the market, and

For Quality are Unequalled.

CREAMS OF EVERY KIND FOR EXPORT TRADE.

Spun Ointments are the production of Shen Works only. All B.P. Ointments are now spun. Private Formulæ made up and spun. Customers' own ingredients may be supplied. Secrecy of formulæ and integrity of materials guaranteed. SPECIAL CASH WITH ORDER PRICES may be had, goods d/d London, or free on rail or steamer.

TOOTH POWDERS

For every class of trade. The largest output in the Kingdom. Over 50 standard grades. In bulk or packed in tins. Private receipts carefully attended to and executed with integrity.

SNOW-WHITE

EMULSION OF B.P. PETRO-LEUM OIL

Will keep indefinitely. Strength 50 %.

SNOW-WHITE

EMULSION OF COD LIVER

Palatable as Cream.

CHEMICAL FOOD

SYR. HYPOPHOS. CO. (Neutral). SYR.HYPOPHOS. CO. (Codex). SYRUPS, CONCENTRATED (1.7 pro B.P.)

EXTRACT OF MALT AND COD LIVER OIL

SALINES

CITRATE OF MAGNESIA.
CARLSBAD POWDER.
EFF. SULPHATE OF SODA, etc.

COLLAPSIBLE TUBES

FOR HOME AND EXPORT TRADE.
Spun Toilet Lanolines. Spun Cold Creams.
,, Tooth Pastes. Spun Ointments, etc. etc.
Warranted not to leak.

(SHEN) LIME CREAM

NEVER TURNS RANCID.
NEVER GETS THICK.
WILL KEEP IN ANY CLIMATE.
A large selection of labels,
Packed in 1 doz. Wooden or Corrugated Outers.

COLD CREAM No. 1 2 3 4

HAIR DYES (in all shades), POMADES, SHAMPOOS

WHITE FULLER'S EARTH (Borated Talcum), VIOLET POWDER, etc.

In Cartons, Boxes, Barrels, and Oval Decorated Canisters with Sprinkler Tops.

"YENA" POWDER DE RIZ

Bijou Small Large Jumbo (SHEN)
N.B.—This is the best Selling Line ever offered. Showcards supplied free.

We pack everything necessary to a Chemist's business. Let us do your packing for you. If you have a special ointment or cream, have it "spun" and see the difference. Write for new illustrated price list. Send us your inquiries. Largest Ointment Makers in the World.

ROBERT BLACKIE Specialist

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SHEN WORKS, TOWER BRIDGE RD., LONDON, S.E. 1.

COMPOUND SULPHUR TABLETS
Containing Sulphur B.P., Cream of Tartar, Refined Sugar, Orange Flavoured, Guaranteed Pure.
Packed in 7-lb. Counter Boxes 2/2 per lb.

BISMUTHATED MAGNESIA TABLETS
Antacid and Refrigerant
Packed in 7-lb, Counter Boxes 3/- per lb.

"DETERGOL" An Ideal Antiseptic Decodorant
No. 1 - 7/6 per gallon. DISINFECTANT
Contains 20% more Cresol than any other similar preparation. Surgical Instruments can be safely sterifised and disinfected in a few seconds without danger of corroding by using "Detergol." Used by the Medical Profession for fourteen years.

"DETERGOL" No. 2 - 4/6 per gallon.
For ordinary disinfecting purposes, miscible in water.

Carriage Paid on orders of \$\frac{1}{2}\$ and upwards in the U.K.
TABLETS, PILLS, etc., and CHEMICAL AND MEDICINAL PREPARATIONS of all descriptions
Manufactured by
HOUGH, HOSEASON & CO., LTD.
Wholesale Manufacturing Chemists - MANCHESTER.

LIKE MAGIC

ESTABLISHED OVER 50 YEARS.

CURES

COUGHS & COLDS

And all Chest and Lung Affections.

ORDER A SUPPLY NOW. THERE IS AN INCREAS-ING DEMAND FOR THIS POPULAR MEDICINE.

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"LICORICINE" is an article of wonderful merit. Widespread recommendation and steady and persistent advertising ensures a rapidly increasing sale.

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"No case too bad!

The Minimum Prices are fixed at-

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| 10½d. | 8/6 |
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Carriage Paid. 5% Discount on orders of £6 and upward paid within 30 days.

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SPRAINS. SWELLINGS. GOUT. RHEUMATISM. STIFF JOINTS, &c. &c.

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CREAMS

A Revolution in Medicated Lozenges.

Raspberry Sulphur Creams.
Sulphur Figs.

ONLY SHOW THEM.

THEY SELL THEMSELVES.

2/1 per lb. 28 lb. 2/- 56 lb. 1/11

ALL-THE-YEAR-ROUND CONFECTION.

SIMRO'S WHITE ALPINE MINTS

A delightful Peppermint-flavoured Cream, made with pure Sugar and the Finest Peppermint Oil.

A PURE & WHOLESOME SWEETMEAT FOR YOUNG & OLD.

PRICES:

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Medicated Pastilles.

OUR OWN MANUFACTURE.
PREPARED ENTIRELY WITH THE FINEST GUM ARABIC.

BLACK THROAT PASTILLES. BLACK ANTISEPTIC PASTILLES.

If ordered "Throat Pastilles," our ribbed shape sent.
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CHILDREN'S THROAT PASTILLES. EUCALYPTUS
GEMS. CHLORO-PINES (our speciality).

LINSEED, LIQUORICE and CHLORODYNE.

The best and strongest on the market.

2/8 per lb., Packed in 4lb. tins.

16 lb. 2/6.

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EUCALYPTUS and MENTHOL PASTILLES, 3/- per lb.

POTTER & CLARKE, LTD.

60/64 ARTILLERY LANE, LONDON, E.1.

And at 24 LUNA STREET, GREAT ANCOATS, MANCHESTER.

FINEST BLACKS AND

COLOURS

(ALL SHADES)

CARAMEL COLOUR

IN POWDER.

Guaranteed Harmless.

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times the concentration of Liquid Caramel.

Sample on application.

Soluble in

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WAX BENZOLINE
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IN FACT—ANYTHING.

BLACK FOR INK.

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A combined Stain and Preservative for Wood

HOUSEHOLD DYES.

RHEUMSOL BATH SALTS
In 1/- Tins.

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Hounslow, Middlesex.

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Genuine Russian L 0011

PARAFFIN

All gravities, correct viscosities

"Jasmine Brand" ADEPS LANA

Lanoline

Superfine Anhydr. and Hydrous

"Jasmine Brand" PETROLEUM JELLIES

White and Yellow

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Finest Qualities

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Chem. Pure, Water-white, Tasteless, Odourless FOR MANUFACTURING PURPOSES

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Actual Refiners and Manufacturers at their Works near London.

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COLOURLESS, TASTELESS, ODOURLESS, ALL SPECIFIC GRAVITIES

Petroleum Jellies B.P.

WHITE, LEMON, YELLOW, AMBER, RED, GREEN,

White & Coloured Oils

YELLOW, GREEN, RED for BRILLIANTINE ele

Wholesale & Export only

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WE SOLICIT YOUR ENQUIRIES FOR:—

OLIVE OILS, finest cream edible B.P.

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TURPENTINE, American Spirits and Substitutes
CASTOR OILS, all grades
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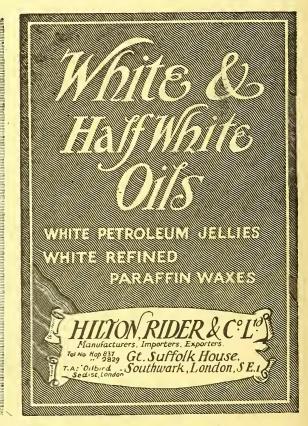
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"OLEUM DEELINÆ," a certain cure for Eczema.

Phone: 186 Bootle.

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Edible
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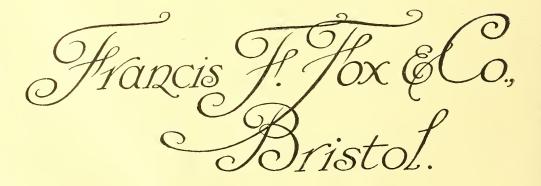
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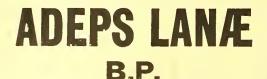


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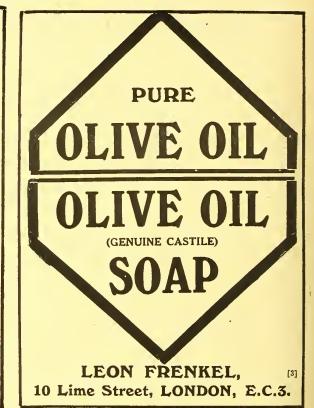
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BRILLIANTINE OILS

Any Quantity—from Stock.
Wholesale Only.

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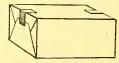
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ASK YOUR STATIONER FOR FULL PARTICULARS.

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Gummed Tape Makers,

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OLIVE OIL

The position is very acute, and it is almost impossible to obtain further shipments. Buy vour requirements of Edible Oil before the season commences.

FINEST FRENCH. The best quality on the market.

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We can also supply very advantageously:

ESSENTIAL OILS (all descriptions) CASTOR OIL CREAM OF TARTAR, 99/100 B.P. SARSAPARILLA LIQUORICE BLOCK AND STICKS **HYDRASTIS**

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LOWEST PRICES. HIGHEST QUALITY. STRICTLY WHOLESALE. SAMPLES. PRICES AND FULL PARTICULARS ON APPLICATION.

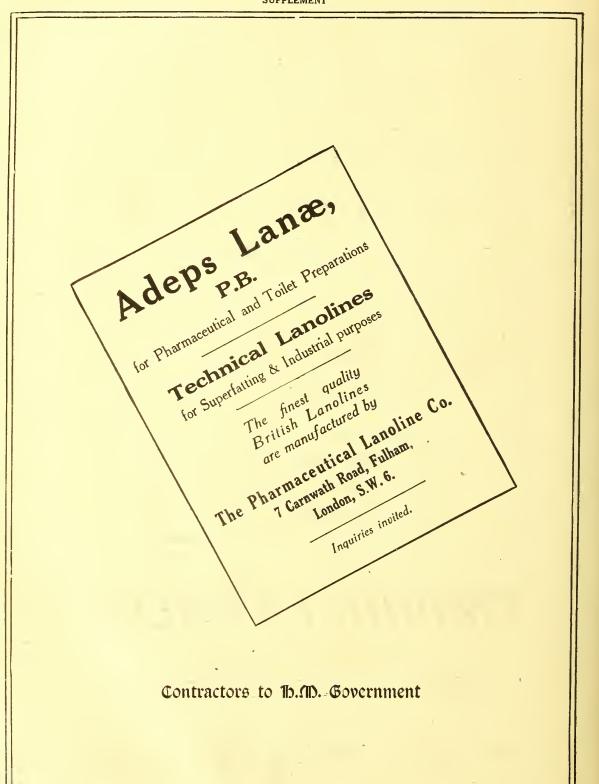
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Customers' own Formulæ faithfully prepared.

Howard Lloyd's have an established Reputation for



Accuracy Reliability Finish



HOWARD LLOYD & CO., Ltd.
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"EMPIRE" LANOLINE

Nothing finer on the market.

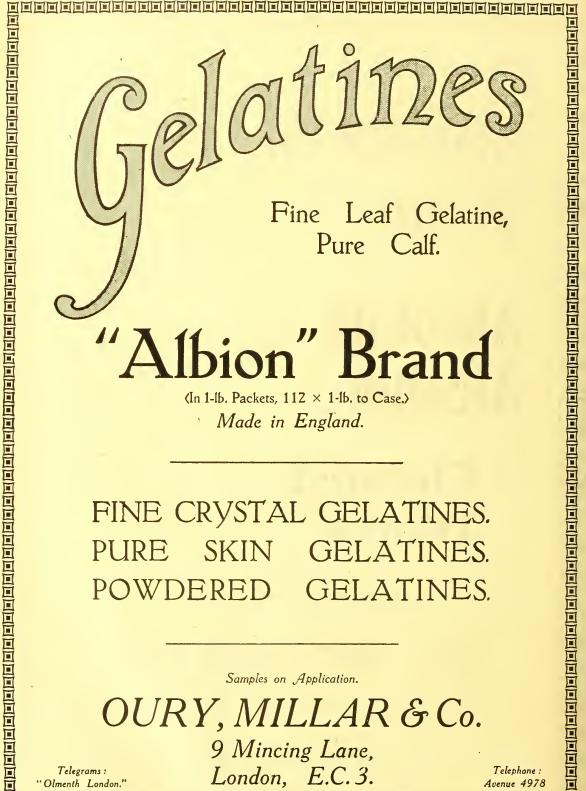
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Fine Leaf Gelatine, Pure Calf.

(In 1-lb. Packets, 112 × 1-lb. to Case.) Made in England.

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All strengths. Absolute Alcohol. Duty Paid. Duty free for Export and Scientific purposes. Try the "Extra Rectified" for your Perfumery.

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Sherry, Port, Coca. Meat and Malt, Orange, Orange and Quinine, Champagnes.

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Medicinal, Castor Oils, Lubricating.

Colza Oils, Best Pure, Prepared.

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For emptying Casks without Pump, Tap or Stillage. Applied to and removed from any cask removed from any case instantly. All waste and mess prevented. More rapid in action than a pump- will nt any ordinary cask from 20 to 60 gallons. Does not damage the cask. C. WELLS & CO. 90 Midland Road, LONDON.

WHITE OILS. PETROLEUM JELLIES. PARAFFIN WAXES.

NEUTRAL OILS,
Debloomed and Undebloomed. PALE & RED LUBRICATING OILS CYLINDER OILS.

SOLE EUROPEAN W. J. SMITH, REPRESENTATIVE, THE JAMES B. BERRY'S SONS CO. Inc. 110 Cannon Street, London, E.C.4. ownsons, have it!

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It will pay you to watch carefully the lists of goods offered for sale by tender, appearing in the daily press.

Fix that firmly in mind. When customers demand, meet their requests. If you cannot, replenish stocks from the Biggest Business Deal on Record. £5,000,000—£10,000,000 worth of Government Surplus Stores, 50,000 items.

(Bulk Offer by) "D" Dept. CASTOR OIL

Pure Pharmaceutical 1st Pressings 2nd Pressings

In Bulk, Barrels, Drums and Cases

Large Quantities Available.

SOAP.

Pale Yellow, Crosfield's Gossage's make, packed in 50-lb. boxes, containing $20 \times 2\frac{1}{2}$ -lb. bars.

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Zanzibar, Abyssinian, Benguella, Mozambique. Packed in bags of $1\frac{3}{4}$ cwt. each.

RUSSIAN TALLOW.

Packed in 5-cwt, casks.

DISINFECTANTS.

Sanitas, Okal.'

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JELLY.

Petroleum.

We can also supply-

MINERAL, RAPE, SWEET and OLIVE OILS, GLOVES (RUBBER), ISINGLASS, PARAQUIT, VERMIJELLI, NAPTHA-LINE PASTE, TURPENTINE.

Don't blame us if you are not supplied, we are announcing broadcast our desire to supply you. It is necessary fo you to respond quickly in the manner indicated.

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Petroleum Jelly

White, Yellow, Amber, & Ruby Red, for all **Pharmaceutical** Veterinary purposes

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WHITE BEESWAX YELLOW BEESWAX

Slabs, Bars, Tablets or Discs

CERESINE WAX Bleached Carnauba Wax Carnauba Wax Residues

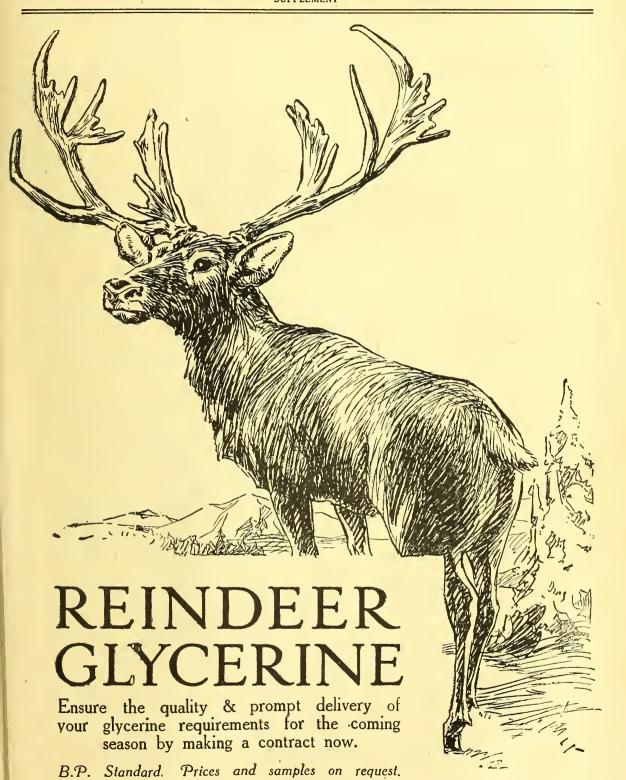
All Waxes Refined, Bleached and Manufactured at our Works, REDHILL. SURREY

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CHRISTR. THOMAS & BROS. LTD.

Distillers of Reindeer Glycerine,

Have you a WINE LICENCE?

If not, you should take steps to procure one, and we will pay the cost.

If you already have a licence we undertake to pay the annual charge.



The only conditions are—

- 1. That you agree to give full display to Dr. Hale's Vin-Sanguis in your premises all the year round.
- 2. That you give us an agreed initial order.
- 3. That you keep Dr. Hale's Vin-Sanguis always in stock. Advertising Matter and Doctors' Samples free.

Trans - Continental Limited Agencies,

Proprietors of Dr. Hale's Vin-Sanguis. 14 Southampton Street, Strand, London, W.C. 2.

CARVER'S

BLOOD PURIFIER.

Invigorates and Purifies the Whole System.

Attractively packed. Shows 50% Profit to you.

Price in gross lots. per 100/- gross. Carriage Paid. Less Special Stocking Bonus of 5 %

A scientifically prepared Effervescing Saline, possessing medicinal properties superior to the ordinary Health Salts

A FREE TIN

will be sent for your personal trial on receipt of application on letter heading.

Sole Proprietors-

4 oz. Size Retailed at 1/-

Prepared in strict accordance with the Formula of the British Pharmacopœia

A. MILLAR & CO.

LIMITED

DUBLIN

Wholesale Only.

London Agent: James Stirton, 43 Gt. Tower St., London, E.C. 3

BISHOP'S Natural Fruit Saline.

THE BEST SELLER.

This preparation, our latest Saline, made by our special process, without Sugar or Saccharine, is a unique Saline. It is strongly effervescent and delightfully palatable, making a bright, refreshing draught which acts as a mild but very thorough aperient, anti-acid and liver stimulant.

Bishop's Natural Fruit Saline is taken regularly with pleasure and safety by men, women and children all the year round. This steady demand makes it a profitable winter line. It keeps perfectly in all climates.

The Wholesale price is 20/- per doz. On £5 lots, discount 10%, and carriage paid. The P.A.T.A. Retail Price is 2/3 per bottle.

This ensures a profit of 9d. per bottle to the chemist.

Prepared only by

ALFRED BISHOP, LIMITED, 48 Spelman Street, LONDON, E. 1.

MASON'S EXTRACT OF HERBS

can be made up successfully with Treacle.

Please apply for supply of descriptive bills for distribution or counter use, to

Newball & Mason NOTTINGHAM.

SELLS FREELY & READILY

PAYS 50% ON OUTLAY

An Infallible Remedy for GOUT.

RHEUMATISM,

ECZEMA.

and SKIN

AFFECTIONS.

4 oz. 1/- 8/- net 8 oz. 1/10 15/- "

Bottles 2/6 20/- # The only line of its kind on the market.

SOLD EVERYWHERE

Manufactured by



The Record Sale for Lemonade G. ın one Pharmacy 1919 totalled in of upwards £100: 0s.: 0d.

Mr. C. H. Bartle, S.E.16 (SCOUTMASTER), writing us on April 26, 1920, says, in reference to G. O. LEMONADE:
"It is the best of its kind I have ever come across for Camp purposes. Had I known of it years ago my great difficulty of Camp Drinks would have been overcome."

No Sugar Required. Sells on its Merits. The Profit is Good. BONUS PARCELS.

The two following suggested BONUS PARCELS comprise all the Sizes and show you a clear Profit on Turnover of over 331 per cent. :-

No. 1 Parcel-£ s. d. 1 gross 2d 0.17 6 1 2 6 9 dozen 3½d.

1 dozen 1/3 0 10 6 £2 10

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(1 dozen 6½d. free in payment for display.)

Sent Carriage Paid direct for Cash with order, or through your Wholesale House.

THE GREENWICH LEMONADE CO.,

11 JOHN PENN ST., LONDON, S.E. 13 (J. Milner, M.P.S., Proprietor).

Phone-947 GREENWICH. Telegrams-"Cortlimon, Dept, London."

BUTTS. 108 galls.

ORDER

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BONUS

PARCEL

TO-DAY.

HOGSHEADS. 54 galls.

QR. CASKS. 27 galls.

STRENGTH 17°

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Your 'Special' Shampoo

or Toilet preparation needs a distinctive Block to advertise it in the local news-Block to advertise it in the local newspaper, your leaflets or catalogues. Our Business-Bringing Block R227 (4/-) is only one of many which we have for advertising Toilet Goods. A selection of illustrations for advertising Toilet Articles, Remedies, Photographic or Optical Goods will be sent on request. Please state which department you specially wish to advertise.

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Sells readily ALL the til

COLEMAN & CO., Wincarnis Works, NORWICH.

IMPORTANT NOTE TO CHEMISTS WITHOUT LICENCES

It has been established by law that Registered Chemists may sell "Wincarnis with Quinine" without a licence.



The Finest Quality Aerated Waters are made only with the Finest Quality **ESSENCES**

BOAKE KOBERT

Soluble Essences are of the finest quality and being extremely concentrated are most economical

Lemon Ginger Ale Orange Stone Ginger (Cloudy Ginger Clear Ginger Beer Raspberry Kola Champagne Strawberry Lime Juice and Soda Pineapple Lemon Squash Vanilla

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IVER OI

from the original factory at LOFODEN, NORWAY.

In Original Tin-Lined Barrels, Gallon Tins, Winchesters and Bottles,

Samples and Prices on application to the Sole Proprietors :

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Warehouses, Factory & Laboratory, 20 Bevis Marks. Telephone: 10607 Central. Telegrams: "Freshness Fen."



CHLORIDE of AMMONIUM

The most reliable and effective inhaler for the relief of all kinds of Bronchial Complaints such as Coughs, Nasal Catarrh, Hay Fever, Asthma, etc. etc.

> Packed in a convenient form in carton, complete with the various medications and directions for use

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HAY'S

CONCENTRATED SOLUBLE & FRUIT

ESSENCES

are Acknowledged to be the finest in the Market for the Manufacture of High-class Aerated Beverages, Liqueurs, Cordials, Syrups, &c.

LONDON

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WILLIAM HAY, Ltd., Essence Distillers,

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Head Office and Laboratories-HULL.

Telegraphic Address { "Bushworth London." Ginger Hull."

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Orders for Two Gallons and upwards of Essence may be shipped under Bond.

Indentors when ordering should specify HAY'S Manufacture.

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ESTABLISHED 1785.

THE OLDEST AND LARGEST FIRM ANNATTO, RENNET, AND BUTTER COLOUR MANUFACTURERS IN THE UNITED KINGDOM.

R. J. FULLWOOD & BLAND'S

ANNATTO, RENNET,

BUTTER COLOUR, RENNET POWDER, RENNET TABLETS, ESSENCE of RENNET, JUNKET POWDER, JUNKET TABLETS, SUPPLIED IN BOTTLES AND IN BULK.

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Original **Effective Food Preservative**

The only Food Preservative that has ever been publicity awarded Gold and Silver Medals and Certificates of Merit for Purity and Harmlessness.



Full directions for use enclosed in every package. Packed in 6d. and 2/- Packets and 2/3 Canisters. FAVOURABLE TRADE TERMS UPON APPLICATION TO THE

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(Bottled only at St. Ann's Well, Malvern) BRITISH and BEST of TABLE WATERS,

BURROW'S MALVERN WATER (still). The Purest Natural Spring Water.

BURROW'S MALVERN WATER (sparkling). The Natural Water simply Aerated,



BURROW'S GINGER ALE, LEMON-ADE, GINGER BEER, prepared with the MALVERN Water, and only the purest and most reliable ingredients are employed.

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"JOHN BULL" MALT EXTRACT

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Wholesale and Export only



PAINE & CO.

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Plain and with 15% or 33% (by weight) COD LIVER OIL

DIAPARAFFIN

DRY DIAMALT

Malt Extract and Paraffin in Powder form.

Diastasic Malt Extract in Powder form.

The above Preparations are on the P.A.T.A. and allow a 25% margin.

Plain and in combination with

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Sister Lauras Food

If you stock this Food you know of its wonderful success—know that it is better than we state.

If you have not tried it, order from your whole-saler now, and test it.

It is a quick seller with a good profit—and it always brings repeat orders.

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The Medical Profession are recommending VITMAR for delicate children and Invalids.

If you do not yet stock it your wholesaler will supply you.

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remember the advantages of the "ENERGEN" Brand.

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FOR ALL AGES AND CONDITIONS OF HEALTH AT FIRM AND PROTECTED PRICES.

Food for Babies, Prepared Barley, N. F. Cocca, Biscuits, Wholemeal, &c. See Trade Mark "I. R. Allinson" on all our good—Mone Genuine Without. SPECIAL NOTICE.

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N.B.—Our goods are to be sold only at prices stated upon the Price List we issue to the trade, and we are pleased to exchange any article which may be out of condition.

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Vulcanite DOUCHE FITTINGS

- Spare Parts
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BONE SHIELDS

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French CAPPING SKINS (opaque and transparent)

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Cheap lines in NAIL FILES (bone and steel) carded SAFETY RAZORS and spare blades.

SHAVING BRUSHES French

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at low prices.

And all kinds of Surgical and Hygienic Rubber Goods.

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Red Rubber

British Make 12-inch 4/11 each 13 5/4

5/10 6/4

6/11 17 7/7

18 8/3 8/11

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27/- doz. complete. Black ... Red Unenamelled 30/- ,,

All kinds of Surgical Rubber Goods for Overseas

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ALL BRITISH. Established 44 years. Phone: City 7640.



Manufacturers of every description of INDIA RUBBER, Wholesale & Export only. M. WARNE & CO., Ltd., 29 Gresham Street, LONDON, E.C. 2.



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Catheters and Bougies, in Black or Brown Gum, and Finest Silk Web. Specula, Rectal and Œsophageal Instruments, Horse Catheters and Cattle Probangs. Wholesale and Export only. Price List from the Manufacturers.

MASON BROS. & CHAPMAN, 107 Whitecross St., LONDON, E.C.J.

OR 8 5 PERFUMERY

OOR DS//FOR SEON GEVERAGE CORDS FOR SOMETERS MEDICAL TWINES ALL SIZES AND COLOURS IN STOCK

ion S.C. Co., Ltd. FAWLEY MILLS. London,

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TELEGRAMS ENCAGED PHONE LONDON.

Surgical Cottons
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Rubber
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OIL&RUBBER PROOFING

OF EVERY DESCRIPTION.

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The "LEICESTER" and "NATIONAL" MEDICAL PLASTERS

- ¶ Have a reputation for excellence of quality which is unsurpassed.
- They have been used regularly by the leading Hospitals, Surgeons and Pharmacists for nearly a hundred years.
- They have stood the test of time, and their reputation is increasing day by day.
- This reputation is a guarantee of best quality and best workmanship.
- The "Leicester" and "National" Plasters are sold at prices as favourable as their quality is good.
- Therefore you are safe when ordering your Plasters (all kinds) from

A. de St. Dalmas & Co., Ltd. Leicester.

DRUCGISTS' SUNDRIES.

Below are a few lines quoted from our new illustrated price list. This list contains goods of special interest to every chemist—a copy will be sent post free on application.

BATHING CAPS

| No. 976.—Bathing Cap; circular shape, check sheeting, per doz. 7/6 9/428.— ,, helmet ,, red rubber, lined band 6 sizes Special line, finest india rubber, assorted, 4 colours, decorated with frills, | 3 11/6 per doz. | 13/6 . 27/- |
|--|-----------------------|----------------|
| rosettes, etc | 11 | 25/- |
| ,, ,, ,, larger caps | ,,, | 30/- |
| Bag for bathing costume, waterproof sheeting, assorted colours | ,, | 42/- |

CLINICAL THERMOMETERS

| Verified and Stamped at National Physical Laboratory, Kew. | | | | | | | |
|--|-------------------|-------------|------------|--|---------------|--|--|
| Hospital pattern per o | loz. 28 /- | 60-seconds, | lens front | | per doz. 38/- | | |
| ,, lens front ,, | 31/- | 30-seconds. | plain | | ., 40/- | | |
| 60-seconds, plain ,, | 34/- | | lens front | | 44/- | | |
| Each one in metal case. | | | | | | | |

CUSHIONS

| Fig. 1194.—The "Empire" red india rubber Air Cushion— | | | | | | | | |
|---|------|------|------|------|------|------|------|--------|
| Square shape | DIA. | 14 | 15 | 16 | 17 | 18 | 19 | 20 in: |
| | each | 8/- | 9/- | 10/- | 11/- | 12/- | 14/- | 16/- |
| Square shape | | 12/- | 13/6 | 15/- | 16/6 | 18/- | 19/6 | 22/- |

WATER

| One Quality Only-The Best, Guaranteed for 2 years. | | | | | | | | |
|--|--|--|--|----------------|--|--------------|-------|-----|
| | | | | | | | 10×12 | |
| Fig. 957' Empire" brand, heavy make e | | | | 4/8 4/3 | | 6/- 5/4 | | |
| Plush covers | | | | 1/10 | | | | 3/3 |

SEAMLESS ENEMAS

| Fig. 987.—The "B.E.M." (best English make) with bone rectal pipe, etc., | | |
|---|----------|------|
| complete in superior card box | per doz. | 29/- |
| \cdot , in leatherette dom ϵ -top case | ,, | 32/ |
| extra large and stout, the finest article made | " | 36/- |
| 275.—Warne's, arabesque rubber, in leatherette case | | 50/- |
| 988.—The "Empire," black polished, in card box | " | 28/- |
| in oval leatherette case | ,, | 31/- |
| ,, ,, ,, mover retrievele case | " | 31/- |

5% discount allowed for prompt cash off above prices.

We are the right House for BRITISH-MADE GOODS—Anti-Rheumatic Rings, Bandages, Belts, Catheters, Clinical Thermometers, Combs, Enemas, Elastic Hosiery, Hot Water Bottles, Pessaries (Quinine), Rubber Sponges, Splints, Sponge Bags, Tooth Brushes, Trusses, Water & Air Beds, Water & Air Cushions, Waterproof Sheeting, & every description of Rubber Goods.

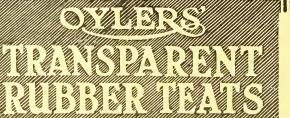
Illustrated price list post free.

Our Goods are Right.

Money back if not satisfied.

BURGE, WARREN & RIDGLEY.

91 & 92 GREAT SAFFRON HILL, LONDON, E.C.1.



ENSURE PROTECTION

IN THEIR PARTICULAR PROVINCE as they are of the best manufacture, standing all tests, including boiling-are easy for the baby, and possess the characteristics of great clearness. All parts accessible and durable.

SPECIAL DESIGNS FOR SPECIAL HOME AND OVERSEAS MARKETS. Write at once to your wholesaler and get the share of the business in your district.



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Real Good Lines

Pumisope "The Hand Cleaner."

Dry Cloth-cleaning Balls
(All Colours)

Precipitated Chalk

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Fancy Boot-top **Cleaning Balls** (All Colours)

Magnesia, Kouge,



HANCOCK'S,

"The Factory," OLD BATTERSEA, S.W.11. WHOLESALE: Write for QUOTATIONS.

Foot Ailments

There's a "SCHOLL" appliance for every kind of foot trouble. The appliances give instant relief and permanent correction in all cases of Weak or Flat Foot, Corns, Bunions, Weak Arches, and other forms of foot discomfort.

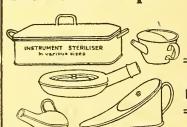




are the invention of Dr. Wm. M. Scholl, the eminent Foot Specialist, and manufactured under his supervision.

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Enamelled Hospital Requisites



QUALITY. PERFECT

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Write for Catalogue.

ORME, EVANS & CO., LTD. Works: Wolverhampton, England. Showrooms-London, Sydney, Capetown.





For British Made



Trusses, Belts, Suspensories, Elastic Hosiery, Webs & Surgical Appliances.

Purchase no German Goods, and from British Firms only.

Victoria 91/93 Newington Causeway, LONDON, S.E.1

Best British Make.

Kenley Seamless Rubber Works

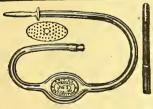
Teats, Soothers, Finger-Cots, and every description of Surgical Rubber Goods.

Inquiries invited.

Samples submitted. Wholesale and Export.

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KENLEY Surrey.



ENEMAS

Whirling Sprays and Surgicai Rubber Goods

of all descriptions.

Prompt delivery. Wholesale only.

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THE BRITISH RUBBER MANUFACTURES, LIMITED,

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Victoria Chemical Works LINCOLN.

MANUFACTURERS OF

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CATTLE WASH **EMBROCATION**

(Veterinary and Household)

WEED KILLER DISINFECTANTS

PACKED UNDER CHEMIST'S OWN NAME IF REQUIRED. WRITE FOR PRICE LIST.

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A Friend in need is a Friend indeed.

"EVERSAFE" PACIFIER

is a friend indeed to both Mother and Baby, for it is REALLY SOOTHING and POSITIVELY SAFE.

> Soothing because of its soft resilient teat, which always retains its nipple form, and safe from the fact that the teat never pulls off. It sells at sight and is both profitable and creditable. It is a line worth the handling. A sample may be had for the asking, or one sample parcel (not repeatable), accompanied by remittance, as follows:—

> 1 dozen No. 2, 4½d. line ... 2/9 per dozen 1 ,, ,, 2c, 6d. ,, ... 1 ,, ,, 3 7½d. ,, ... 3/2

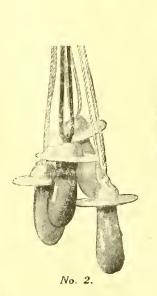
Carriage paid anywhere within the United Kingdom for 10/6, or to any part of the World for 11/6.

May be obtained in the ordinary way from the Wholesalers, or direct from

F. SCHUTZE & CO. Ltd.

Manufacturers of Specialities in Druggists' Sundries,

18 Market Road, London, N. 7.





No. 9, Cherry Teat. No.11. Cherry Teat with Ring.



No. 2b, with Concave Perforated Shield; No. 3a, Concave Shield and Ring.

TELEPHONE: NORTH 992.

CODE: ABC (5th Edition).

London, N.W. 5

Wholesale and Export (HOWARD, STEVENS & Co., LTD., Proprietors) Druggists.

20 Highgate Road,

June 26, 1920.

PROPRIETORS OF "MOOVIT" CORN PENCIL.

Dear Sir,

I offer you a SOLE AGENCY for my "MOOVIT" Corn Pencil, with a guarantee against loss—AN ABSOLUTE GUARANTEE. Not an unknown article, bear in mind, but well advertised, a READY SELLER, and carrying with it an unusual amount of recommendation business.

Most people suffer from corns, and suffer, as you know, more in the warm weather. "MOOVIT" must have REAL MERIT, for I have sold ONE HUNDRED THOUSAND PENCILS in the last few months, and could have sold more but for stock shortage. Users get enthusiastic, and freely mention the pencil to their friends. Our advertising and STRIKING POSTERS and display matter make sales easy.

I want your co-operation in a steady trade, not your money on a single March along with me and snap up the trade for your local corn sufferers—YOU CAN DO IT. There is no work in selling "MOOVIT" Pencils. You make nearly sixpence every time this little article is handed across the counter; but, MORE IMPORTANT, you make a new customer for other possible sales.

Post to me a cheque £5 14s., and—

(a) I will send, carriage paid, 12 dozen "MOOVIT" Pencils, retail 1/3, to realise £9. (b) I will insert a two-inch. advt. in your local paper, mentioning your name, and bringing corn sufferers to your door. (c) I will supply you with striking display matter for counter, and I GUARANTEE TO TAKE BACK ALL UNSOLD STOCK.

I offer you this Sole Agency for ten days from this date. Remember again I PROTECT YOU AGAINST ALL LOSS.

Yours very faithfully,

TALBOT WILSON.

 ON THE P.A.T.A.

CURASOL Boracic

The Original Socks



Selling Price 6d. per Pair.

Over 56% Profit on Outlay.

Trial Three Dozen

assorted sizes in substantial carton for counter or fitting 12s. 6d.

If Cash with order 12s.

Stock Boxes

containing six dozen assorted sizes from which carton can be refilled. 24s. 0d.

2d. per dozen allowance if cash sent with order. Send for Sample Pair (state size) and Showcard.

Stocked by all Sundriesmen, or direct from-

The Curasol Sock Co., 19/20 Garlick Hill,

Remittances should be by Postal Orders, Money Orders, or Cheques, and crossed a/c Payee, Lloyds Bank.

London, E.C.3.



Could you supply Movol if you were asked for it?

THE continued high prices for new white linen is making Movol very popular. "A cover stained with Ironmould loses its terror where the Movol magician is, and so easily, too' this is what your customers are reading every

Could you supply Movol if you were asked for it or would you have to turn them away to "the other man?"

By a judicious display of Movol showcards and a moderate supply of handy tubes these ladies will come your way. And why not?



STAIN REMOVER

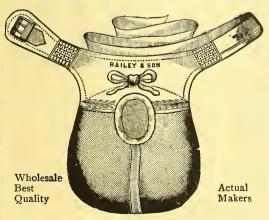
Removes Ironmould, Rus., Fruit and Ink Stains from White Linen, Coothing, Marble, etc.
Send a postcard to-day for particulars. A quantity of Showcards will be sent with your surfly. Write the

Makers

WM. EDGE & SONS Ltd., Bolton

(The Drummer Dye People).

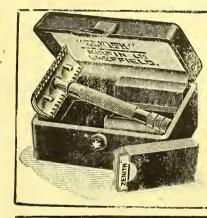
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Bottom Prices. A complete Register is kept for all repeat orders. Illustrated Price List Free. Correspondence Invited. Best Shipping Terms.

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SAFETY RAZORS

WRITE FOR TERMS.

Made in seven styles on scientific lines. Perfect curved top Silver Plated. High-class Finish.

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EXCELSIOR CREPE BANDAGES. FAST EDGE.

EXCELSIOR

Owing to the War, the supply of Crepe Velpeau Bandages is discontinued. We, are, therefore, placing on the market a bandage of English manufacture which will be sold as

GIMBER'S EXCELSION

CREPE BANDAGE

An Elastic Pandage. Containing no Indiarubber.
Superseding Elastic Stockings, Webs, Bandages, and at half the cost.
Three sizes, about 2, 24, and 3½ inches wide.
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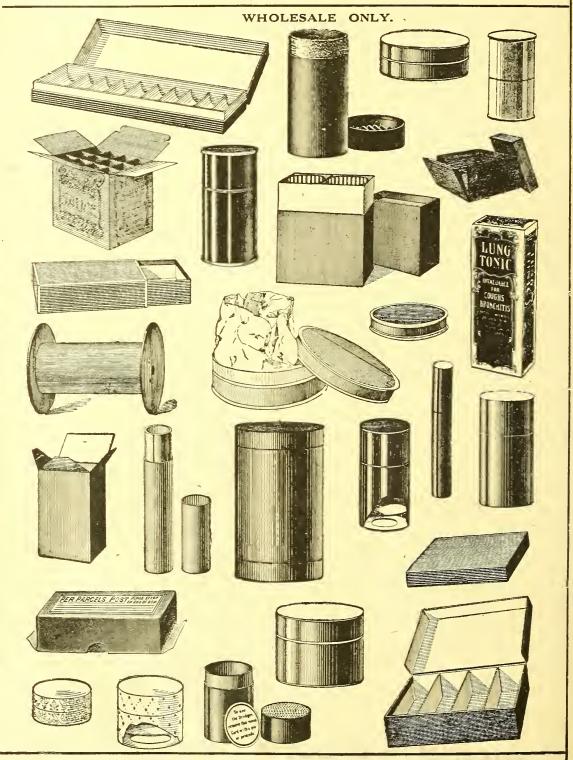
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ESTABLISHED 1889.



BOXES FOR ALL PURPOSES.

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"STAG" BRAND.

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Specialities:



ESTABLISHED 1839.

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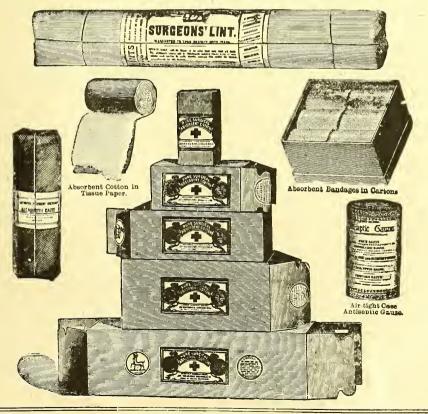
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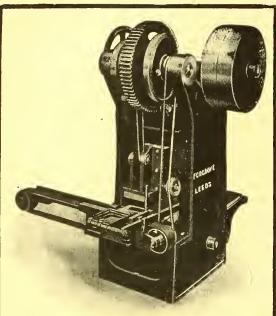
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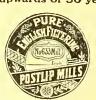
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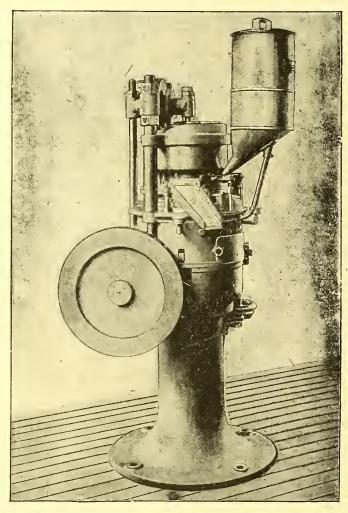
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Made in two sizes— 12-Punch and 20-Punch.

The 12-Punch

Machine is suitable for tablets from \$" diameter up to \$\frac{x}{x}" diameter.

Output up to 400 tablets per minute.



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Machine is suitable for tablets from ¼" diameter up to ½" diameter.



Output up to 700 tablets per minute.

Patent No. 1

ROTARY TABLET MACHINE

Floor space, 3 ft. \times 3 ft.

4 Horse-Power should be available.

Pulleys are fast and loose and are 12 in. diameter and 3 in. face, and should be run at 350 revolutions per minute.

Extra sets of Punches and Dies can be supplied as required. The worm Gear runs in a bath of oil. Weight of tablet can be adjusted while the machine is running, and by a patented filling device the degree of accuracy of weight of tablet is very high.

These machines are used with much success where very large production is required.

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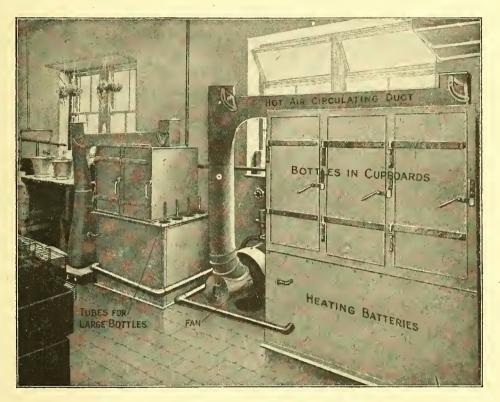
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DEAL WITH ANY SIZE, SHAPE & QUANTITY OF BOTTLES IN AS MANY MINUTES AS HOURS TAKEN BY ANY OTHER METHOD OF DRYING.



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"THE BOTTLE DRYING MACHINES have worked satisfactorily from the beginning; in fact, we do not know how we should have managed without them.

We find the Dryers particularly useful when dealing with 'rush orders' which call for large

We find the Dryers particularly useful when dealing with 'rush orders' which call for large quantities of bottles, as the bottles can be washed and dried—in considerable quantity—inside an hour, whereas under the old system it would have taken the best part of a day, and the bottles would not have been so completely dried as under the present system."

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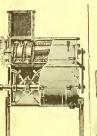
Used for everything "SIFTABLE" or everything "MIXABLE."

STANDARD PATIERN combined Machines (Figs. 1 to 4) will at one operation thoroughly Sift and Mix all dry powders, and reduce to powder and sift any that contain lumps. Largely used for Drugs, Chemicals, Acids,

Baking Powder, Self-raising Flour, Cattle Foods, Sugar, Colours, Sherbet,

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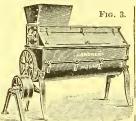
Also for the preparation of High Explosives.



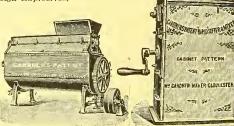
F1G. 1. Sizes for Hand Use.



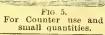
F1G. 2. Power Sizes with Pulleys.



Pulley and Gear Drive. The type recommended



F1G. 4. Large capacity Powerdriven Machines.





CARDNER'S Patent "RAPID" SIFTER, MIXER, AND CRUSHER.

Fig. 6.

For breaking down large and hard lumps in Sugar, Acids, Chicory, Salt, Colours, Soda, small enough to be reduced, sifted, and mixed afterwards and mixed afterwards.



GARDNER'S Patent "RAPID" SIFTER, MIXER, AND ESSENCE SPRAYER.

Fig. 7.

Liquids. For adding Liquids, Essences, Flavourings, Liquid Colours, Oils, &c., to Sugar, Acids, Flour, Face Powders, Disinfectants, Seasonings, and many kinds of Powders and Crystals during Mixing. Crystals during Mixing.



FIG. 8.

Open Bottom Pattern.

CARDNER'S Patent "RAPID" SIFTERS (Figs. 8 to 12) (Power Sizes) sift any kind of Dry Powders, and reduce to powder any that may be lumpy, such as Tartaric Acid, Bicarbonate of Soda. Magnesia, Arrowroot, Sugar, Flour, Colours, Sheep Dip, &c.



FIG.

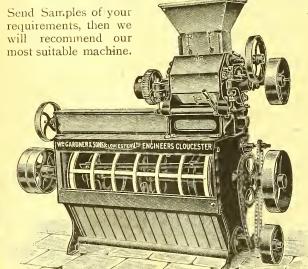


Fig. 10.









This is one form of

GARDNER'S PATENT GRINDING AND DRESSING MACHINE.

For Sugars, Invalids' and Infants' Foods, Paint Colours, Crystals, Drugs, &c.

We make these Mills for Sugar, capacity from $\frac{1}{2}$ cwt. per hour upwards, and any grade of Icing and Castors can be obtained at one operation.

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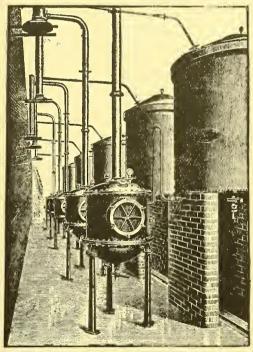
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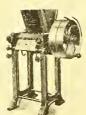
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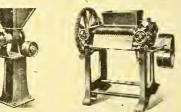




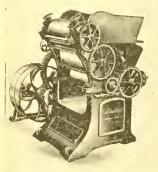
Nº I Plant For Experimental purposes



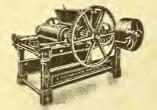
Nº 2 Plant. Output 100 to 200 pounds per day



Nº 3 Plant. Output 300 to 400 pounds per day.





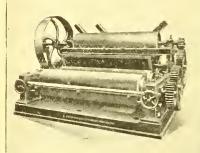




Nº 5 Plant Output 2000 to 2500 pounds per day.



Nº 4 Plant. Output 800 to 1000 pounds per day.



Nº 8 large combined triple granite roller mill with triple rotary cutter. Granite rollers 72 inches long. 20 inches diameter.

Gelephone Nº 123

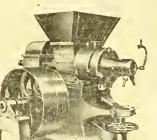
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MILLED TOILET SOAP PLANT.

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Nº 7 improved multiple roller milling and mixing mill made with 10 12 or 14 rollers. This mill may be used in conjunction with our Nº 6 or Nº 7 plodder. Output 3 tons per day.



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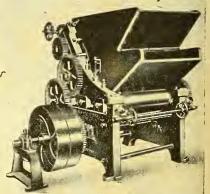
Nº 8 mammoth plodder with reduction gear for Motor drive. Output 3 tons per day.



'Toilet Bar Cutting Machine.



Rotary Cutter or Shredder



Nº 6 Gi ant Quadruple Roller Mill.

Dutput 2 tons per day.

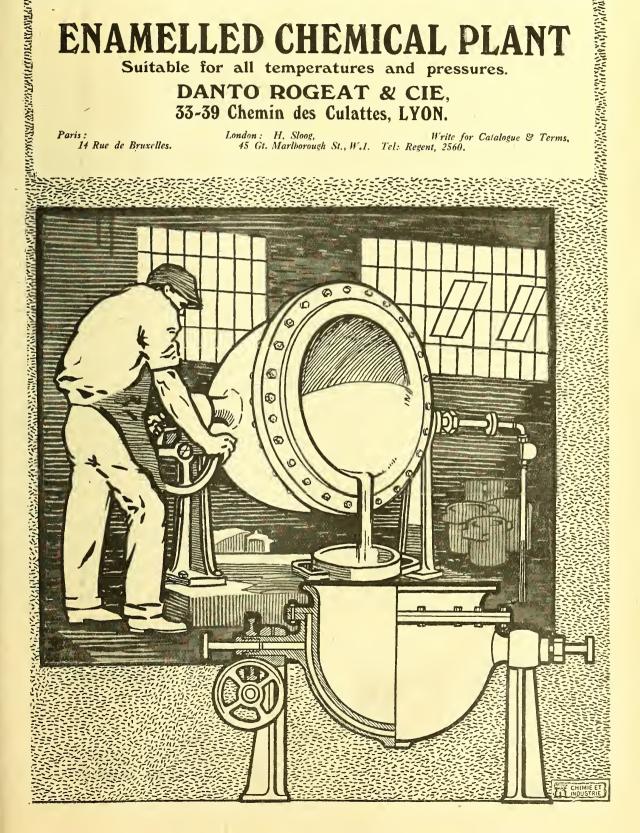
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Suitable for all temperatures and pressures.

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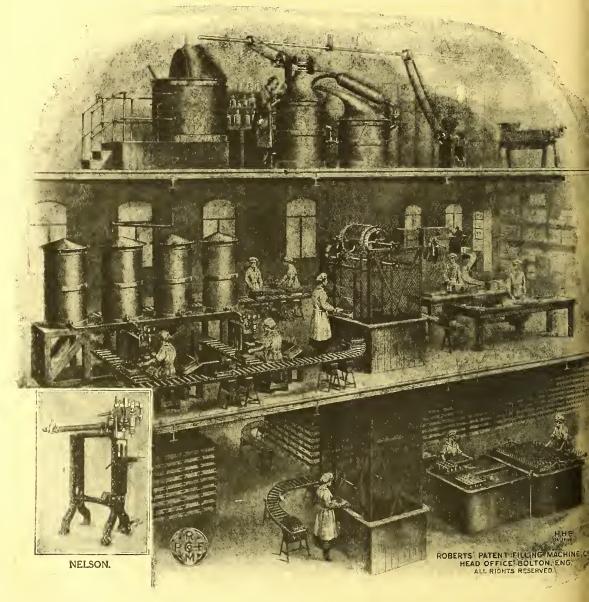
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Two Roberts' Patent Filling Machines (Nelson Type) operated in conjunction with a roller runway system.

Unlimited capacity. Write for prices.

INCREASE OUTPUT AND REDUCE COSTS: Used throughout the world by manufacturers of Sauce, Flavouring Essences, Fluid Beef, Fluid Extracts, Machine Oils, Liquid Gum, Varnishes, Paints, Stains and Polishes, Liquid Blacking, Furniture Creams, Boot Creams, Proprietary Medicines, Emulsions, Cordials Perfumes. Also Artists' Colourmen, Wine and Spirit Merchants, Packers of Small Lines, etc.

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33 ROUNDCROFT STREET, BOLTON.

The examples of expert filling given below were obtained by users of Roberts' Patent Filling Machines—the "Nelson," the "Navy," and the "Victor."



In giving 1000 per hour as an average rate of filling, we are by no means giving the actual capacity of our Machines.

That very High Rates of Filling on our Machines are common in Various Lines, we have the best authority.

In six-ounce Sauce, for instance, we have particulars of the work of 24 girls at the factory of Messrs. Goodall, Backhouse & Co., Leeds, the number of bottles filled in an hour in each case being as follows:—

$$\begin{array}{c} 1905 - 1845 - 1843 - 1842 - 1788 - 1782 - 1769 - 1764 - 1749 - 1728 - 1701 - 1701 \\ 1699 - 1690 - 1670 - 1660 - 1659 - 1656 - 1638 - 1617 - 1592 - 1510 - 1507 - 1387 \end{array}$$

The total, 40,702, giving an average of 1696 bottles per girl per hour, over 28 per minute.

In Hoe's Sauce we have seen a speed of 28 per minute kept up; in Tomato Sauce we have 800 1/- size and 1200 d. size given as an easy rate.

The rate in Lemon Squash—Quarts, on the authority of Messrs. Goodall, Backhouse & Co., is 864 bottles in one our on one machine, Quinine Wine—Pints, 1172 bottles in one hour; Essence Vanilla, ½-oz., 1964, 1-oz., 1788 bottles er hour.

Half-pint burst-off Worcester Sauce, 1900 per hour. In small lines it is just a matter of handling the bottles, the peed in Penny Castor Oil, Turpentine, Glycerine, Camphorated Oil, Perfumes, Essences, Furniture Cream, &c, varies etween 1500 and 2500.

2000 per hour cannot be taken as the limit to the capacity of our machines, Messrs. Castle Brand Co., Newcastlen-Tyne, have obtained from one machine:

2592 Two-ounce Bottles of Black Lacquer in One Hour. 1740 Four-ounce Black Lacquer in One Hour.

To take the previously mentioned figures and form an average, we prove by the testimony of firms of the highest pute in the various trades that the actual capacity of our Machines is far beyond our modest statement of 1000 per hour.

Taken together, all liquids in various sizes of bottles from drachm to quart, from particulars of actual working peeds of not less than one hour's duration (not one minute's work multiplied by sixty), we obtain an average speed all bund of 1580 bottles per hour, as proved average capacity of our Machines.

Many firms find it difficult to understand why a machine, only filling one bottle at a time, should be far superior to machine filling a number of bottles by one movement. Most of these machines are made to discharge a fixed quantity fliquid, and as glass bottles are so unequal in capacity a number are not filled up, whilst others are over-filled and liquid pilled, messing the other bottles in the tray, the wiping of bottles, levelling up, and arranging in the trays before filling, are up considerably more time than filling one at once perfectly and without waste, as fast as you can pick bottles up in the one hand and put them down with the other. In our system of filling we have both hands at liberty, one to feed, and the other to take away, and as both actions seem simultaneous a marvellous speed is possible. The valve is operated by the foot. In most sizes and liquids a greater output per individual worker is obtained by using our machines than ny other.

What multiple filler can fill from a few drops to a quart and upwards, in any liquid, thick or thin, clear or containing adiment?

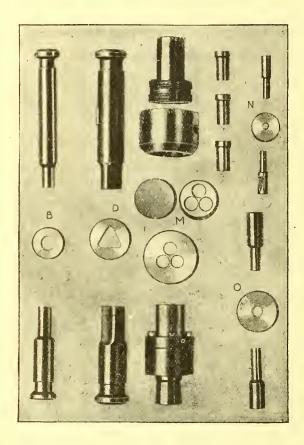
No trouble with the valve. Only one strong valve to clean when cleaning seems necessary. One that never gets ut of order; that you can see inside, and clean after filling Brunswick Black, polishing inside parts if desired, and have the machine ready for any delicate liquid in 30 minutes. The cut-off of the liquid in our machine is precise, and is effectly under control. The wearing parts of our valves are renewable and can be replaced in a few minutes.

AUTOMATIC MACHINES for filling Liquids and Semi-Liquids into receptacles of any apacity from 2-oz. to 2 tons. Used by manufacturers of Liquid Metal Polish, Cycle Oils, Disinfectants, bil Refiners, Paint and Varnish Manufacturers, Lard Refiners, Condensed Milk Packers, Jam, Marmalade, and Lemon Cheese Manufacturers, etc.

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(PLAIN OR DECORATED).

SPRINKLERS

FOR

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METAL CAPS

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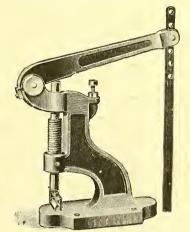




MACHINE for FILLING COL-LAPSIBLE TUBES: From 1 to 10 gallons CAPACITY. Output 30 to 40 gross tubes per day. All WORKING PARTS TIN-PLATED.



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MACHINE for FIXING CLIPS to ends of collapsible tubes. With TREADLE MOTION.

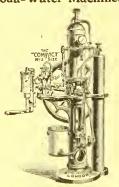
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Manufacturers of

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Everything for Bottling.

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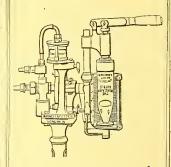
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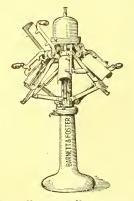
"RED CLUB" BRAND Concentrated Soluble Essences.

"Ideal" Turnover Fillers



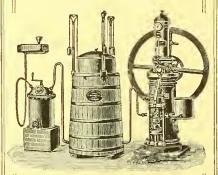
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For all externally stoppered bottles. These machines fill on the Back Pressure system and save 50 per cent. in working costs. Nine sizes; four for hand and five for power.

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Capacities from 100 to 6,000 doz. of 10-oz. bottles per day. Supplied complete with gas work and automatic saturating cylinder, machine for export. The best

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With one of these machines a boy or girl can crown 200 doz. per hour. Far less tiring than foot machines: therefore faster. With or without Automatic Crown Feed.

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For filling Tubes, Pots, Jars, Bottles

BUY A GENUINE

"CENTRAC" MACHINE

and reduce your wages bill.

Used by all Leading Firms.

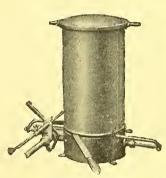
Made in England.



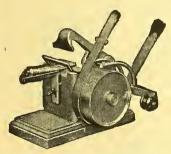
Tube, Jar, Pot Filling Machine



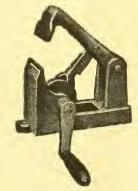
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The "Centrac" machines are unrivalled for excellence, cleanliness, rapidity & cheapness

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Sole Makers:

THE BANISTER STREET WORKS, LTD. Engineers.

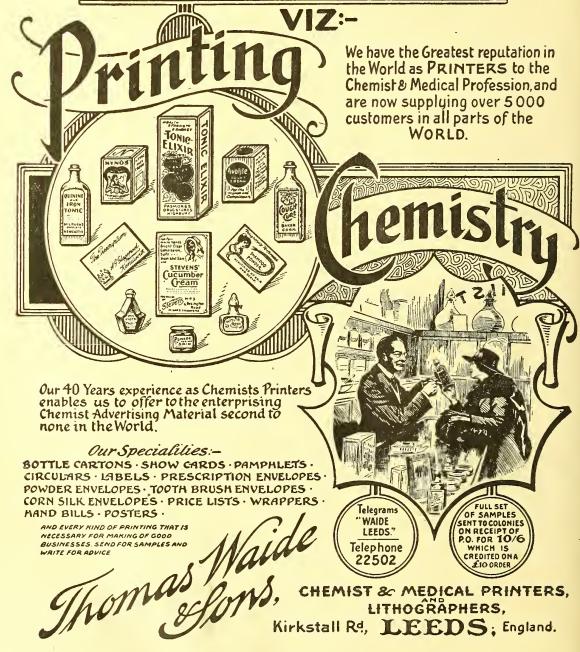
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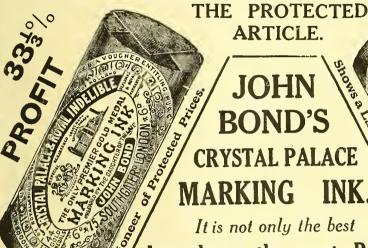


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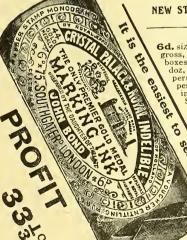
It is not only the best

shows the most Profit. but

Packed in Round Cases with Blue Wrapper.



Or in Square Boxes as Illustrated.



NEW STYLE OF PACKING IF PREFERRED at the small increased cost of 3d. per dozen

WHOLESALE PRICES.

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6d. size, Heat or Non-heat, in blue wrappers 42/- per gross, per doz. 4/-; 6d. size, Non-heat only, in square boxes with pen and holder 45/- per gross, per doz. 4/3; 1/- size, Heat or Non-heat in blue wrappers with pen and holder and Linen Stretcher 77/- per gross, per doz. 7/6; 1/- size Non-heat only in square boxes with pen and holder and Linen Stretcher 77/- per gross, per doz. 7/6

Minimum order at wholesale rates one gross 6d. amounting to 42/- or assorted order to the same value, subject to the cus-

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Carriage paid on parcels of
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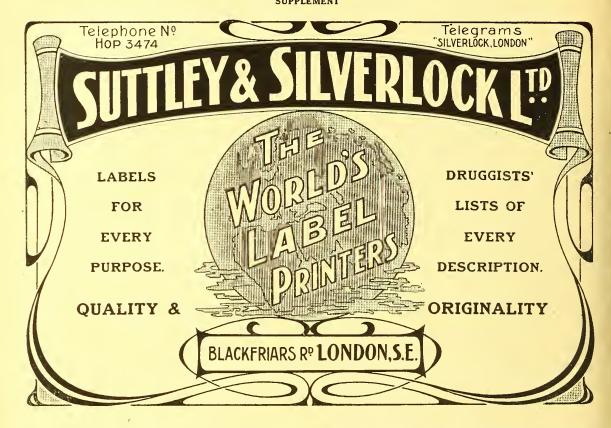
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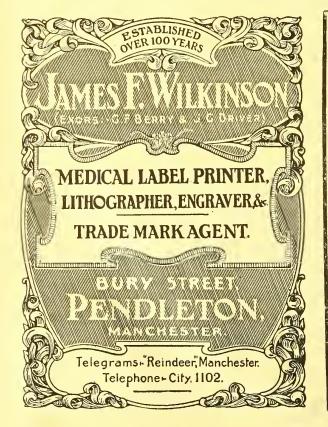
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For Hotels, Outfitters & Public Institutions.
Supplied by the oz.

Heat or Non-Heat-Please Specify when ordering.

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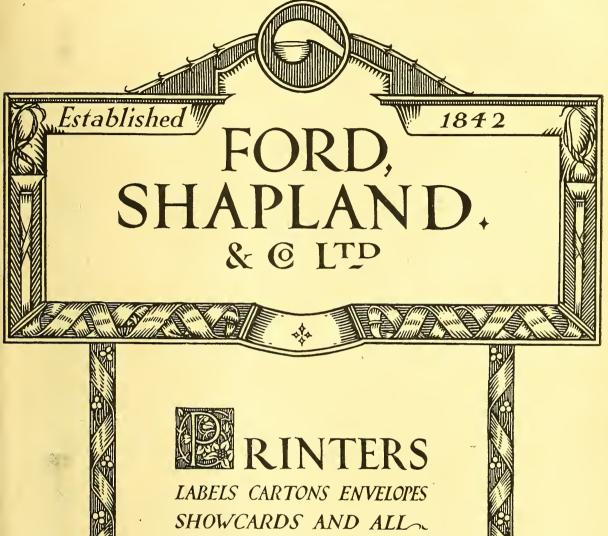
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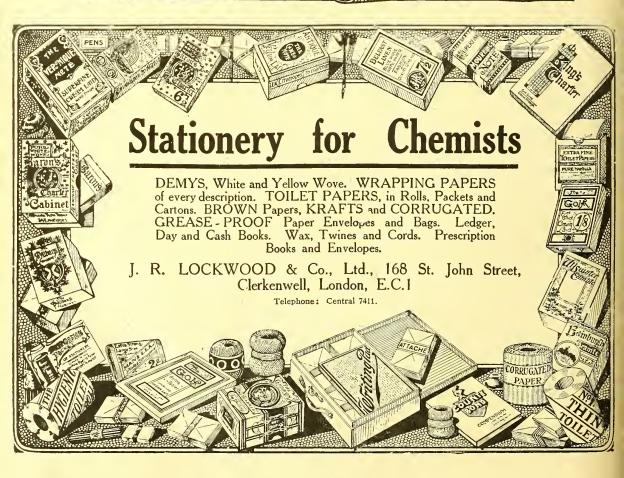
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are recognised to be the acme of perfection in Medicinal Liquid Paraffins. They possess the following essential characteristics:

Brilliantly clear at all temperatures Always of uniformly high quality Absolute Purity Perfectly Tasteless

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We are in a position to supply Tin-Box Containers in any quantity, quality and finish unsurpassed. Send us your inquiries, whether small or large buyers. Special quotations for large buyers.

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| PLAIN. | GILT. | | | |
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| $\frac{1}{2}$ -oz. 5/- gross $\frac{3}{4}$ -oz. 6/- ,, l oz. 7/- ,, | $\frac{1}{2}$ -oz. $5/6$ gross $\frac{3}{4}$ -oz. $6/6$,, 1 oz. $7/6$,, | | | |

ALL SIZES
QUOTED FOR.

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Manufacturer of the World-Famed "Spun" Ointments,

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Telephone: Hop 2415. ASK OUR PRICE FOR "SPUN" OINTMENTS PACKED IN ABOVE TINS, LABELLED.

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Rolls. Sheets. Boxes (COLLAPSIBLE)

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Quick Delivery.

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The Original Preparation for Cleaning Cutlers. Canisters, 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

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Polishing Paste, Furniture Polish, Plate Powder, Rouge, Urn Powder, Steel Polish, Crocus, Tripoli, Brunswick Black.

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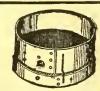
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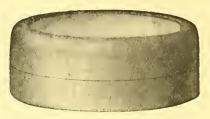
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SATIN-FINISH ALUMINIUM—
ACTUAL SIZE. Suirable for Compressed Powder, Cachous, Tab'ets, Rubber Goods, etc. etc.



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Also made without depression in centre.



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SHAVING-STICK CASE.
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ALUMINIUM.
Push-On or Screw-Fitting.
Closed or Open Bottom.

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Better value for less money. It's easily proved. Ask for a sample of Pyramid Corks or, better still, put in a trial order. If you are not convinced—send them back and get your money.

Pyramid Corks pay.

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CORKS The Best Value in the Trade. ESTABLISHED 150 YEARS.

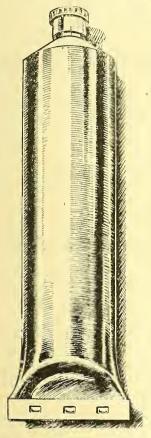
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Tubes that attract

Your collapsible tubes should do more than just hold the contents—they should help sell it.

Every Manufacturer knows "the selling power of the packet" and it is because we realise this that Venesta Tubes possess that quality and finish that goes so far towards selling the goods—remember this when requiring your next supply.

Made in pure tin, lead, and lead coated with tin, plain or enamelled, and printed with customers' own designs, or with designs which we are always pleased to create.

Write for particulars and current prices—your inquiries will receive our immediate attention.

ALSO TIN FOIL—British made

Manufactured in Sheets or Reels.

Venesta Tin Foil is guaranteed free from lead or other injurious alloys. Its excellent finish and polish make it especially suitable for wrapping confectionery, tobacco, cigarettes, foodstuffs, etc.

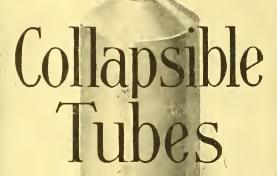
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Your inquiries for plain, coloured or embossed foils, whether for large or small quantities, will receive our immediate attention.

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THE JOHN DALE MFG., Coy., New Southgate. LONDON N.II. TO THE WHOLESALE ONLY



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OPAQUE & TRANSPARENT with R. RAWLEY.

MANUFACTURE LONDON PROMPT DELIVERY

SAMPLES AND PRICES ON APPLICATION,

ROBERT RAWLEY

149 GRAY'S INN ROAD, LONDON, W.C. 1

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BOXES

for ALL purposes

All qualities. All prices.

Send vour samples or sizes and we will FIT you:

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Our methods are new and are such that we can supply much better articles than usual, and give quick delivery. In particular, we have developed the art of annealing small glass articles to perfection, with the result that the breakage factor has been enormously reduced.

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MEDICINAL GELATINE CAPSULES

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INQUIRIES INVITED.

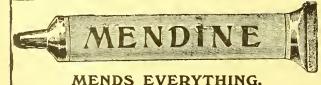
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Realise straight away that, if you are not stocking "Menda-Tear," you are doing you self consistent harm. Each shilling cattonof Menda Tear carries an excell nt proportion of profit and saves the customer much time and money. When selling it, you make money and create goodwill.

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PERFECT Liquid Glue CEMENT

Made from the finest materials obtainable. Guaranteed to retain its efficiency for Six Years. In 2d., 2d., 5d., & 7d. Tubes. Boxed in dozens. Also in Bulk for Carpentry, Joinery and Aeronautical Works.

Indent through Merchant Shippers. Export Cases at Cost, p. fo.b London.

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"Corruganza" SEAMLESS Ointment Boxes

Have replaced the old Willow Boxes.

Being moulded in one plece, the bottoms cannot fall out.



GREASEPROOF. BRITISH MADE.

Stocked by all the leading Wholesale Houses.

Wholesale or Export only from the Manufacturers And at Manchester, Birmingham, Leith, Perth, and Glasgow.

Manufacturers of all kinds of Cardboard Boxes, Folding Packets, Tubes and Canisters, Fibre Board Packing Cases, Corrugated Paper, &c.

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OF EVERY DESCRIPTION. PROMPT DELIVERY.

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Bottles of every description for the Manufacturing Chemists, Oil, Colour and Varnish Trades. Also

Glass Measures and Medicine Glasses GOOD STOCKS ON HAND.

Wholesale Only.

Special Terms on Application.

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Medicals, Tobins, Panels, Limes, Vials, etc. Stocks always available. Let me quote for your requirements.

Lettered Bottles made Glass Flint

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Patent Air Tight Slip-lid Tin

Tight Seaming and Varnish Bottles a Speciality.

THE NORTHERN TIN CANISTER WORKS.

Manufacturers for the Chemical Trade.

Prompt Deliveries
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Solicit inquiries from Manufacturing Chemists and Perfumers for

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Inquiries esteemed for Lettered and Special Pattern Bottles. Please-send sample and we can make mould to match.



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An ideal wrapping for Drugs, Tablets, Bath Crystals, Perfumery, Provisions, Sweets, Surgical Dressings, Articles of Toilet, &c. &c.

Will keep your Goods, Boxes, Bottles, and delicate Labels clean on the Counter and in Shop Windows, allowing the Articles to be seen by transparency. Can be had colourless, coloured and embossed.

Also in the shape of Discs for Creams, Oint ments, Boot Polish, &c.

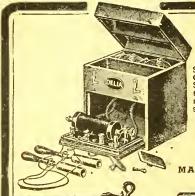
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The CELLOPHANE COMPANY

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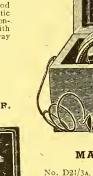
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British Made.

Superior quality Hardwood Case, fitted with Automatic Switch, fall-down front, containing a powerful coil with regulating tube, two-way switch, two batteries, etc.

Price 45 - net.

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Toilet luxury. Bathroom Necessity. Warm or Cold Air can be blown where desired. It is of the utmost value for Rheumatism, Gout, Lumbago, etc. etc. Price cometc. etc. Price com-plete with connecting eord and adapter. £4 13s. 6d. net.

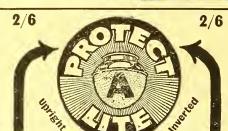
Recommended for Rheumatism, Obesity, Paralysis, Neuralgia, Nervous Diseases and as a general tonic for stimulating the Nerves. In handsomely finished leatherette case lined with velvet, complete with richly nickelled Electrodes £5 2s 6d net. Supplied to work from Electric Lighting Circuit or Dry Batteries.

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Recommended for promoting growth of Hair. 3/9 net-



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Prevents Fires & Saves Gas Mantles Sold by PLUMBERS, IRONMONGERS, &c.

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Every case executed under personal supervision, thus facilitating fit and giving complete satisfaction, Send for price list, &c., to (the only address) A. G. FENTIMAN, 22 Duke St. (off Bishopsgate), Brushfield St., London, E.1

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The world-famed Enamel for Grey & Faded Hair. Absolute, safe and natural.

3/6 size 37/- doz.; 6/6 size, 68/- doz.; 12/6 size, 132/- doz.

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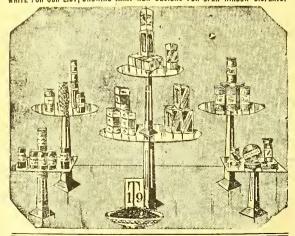
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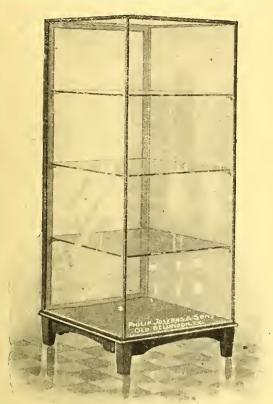
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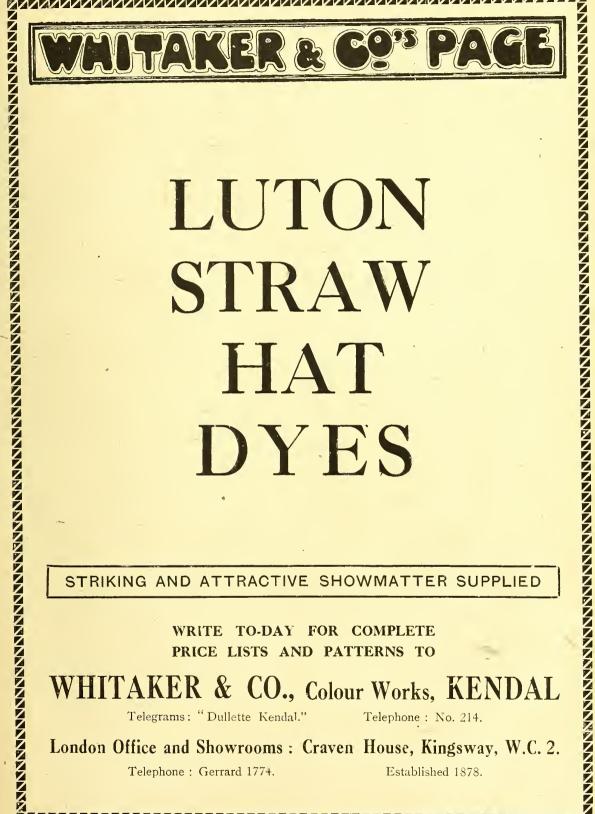
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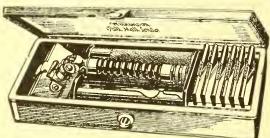
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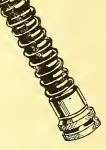
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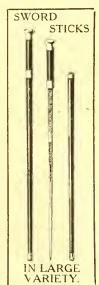
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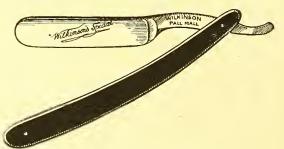
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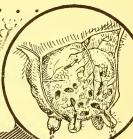
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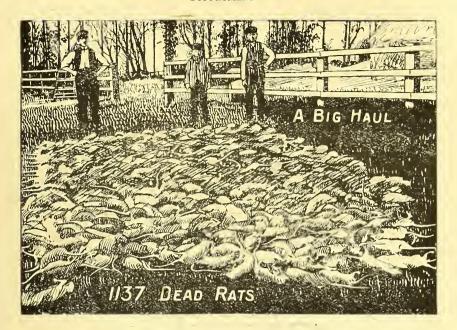
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This Catalogue illustrates all our latest Productions and includes also our Price List of Bulk Drugs

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MAY, ROBERTS & CO., Ltd.

7/13 Clerkenwell Road - - LONDON, E.C. 1

And at 16 Westmoreland Street, DUBLIN.

42 CANNON ST. LONDON, E.C. 4.

JUNE 26, 1920

This Supplement is inserted in copy of The Chemist & Druggist

AND DRUGGIST THE REVISED ADVERTISEMENT

Businesses Wanted and for Disposal, Premises to Let, Goods and Shopfittings for Sale, and Agencies: 6/- for 50 words; every additional 10 words or

SITUATIONS OPEN: 6/- for 40 words; every additional

10 words or less, 6d. SITUATIONS WANTED: 2/- for 18 words; every additional

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Legal Notices, Tenders, Auctions, and all specially spaced announcements, 1/3 per nonpareil line (12 lines=1 inch single column).

Miscellaneous (Wholesalers') Section, for odd and second-hand lots; 10/- for 60 words; 11/- for every additional

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EXCHANGE COLUMN (for Retailers, etc.). Twopence per word, minimum 2/-

BOX NUMBER.

In each case replies may be addressed to a registered number or nom-de-plume, clo this Office, at a charge of 1/- extra for each PAYMENT. advertisement.

All advertisements are prepaid, so that remittance must accompany instructions in each case. If it be necessary to telephone or telegraph an urgent announcement this may be done, provided the money is telegraphed at the same time.

Telephone: Central 3617 (3 lines).

THE CHEMIST AND DRUGGIST, 42 Cannon Street, LONDON, E.C. 4. Telegrams: "Chemieus, Cannon, London" (2 words).

EARLIER CLOSING FOR PRESS. Will advertisers please note that until further notice it will be necessary that Advertisements

intended for the Supplement must FIRST POST THURSDAY MORNING. reach us not later than the

CHEMISTS' TRANSFERS. Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.

Telephone No. 1 City 2283.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION,

1.—LONDON, N.—Well-established Business, including excellent Optical connection; returns exceed £2,000 yearly (present rate); 7-roomed house and garden; rent £60; held on lease; terms, lease and goodwill £75; stock and fixtures by valuation, or lumpsum offer would be considered.

2.—LONDON, S.W.—Ready-money Business; returns last year between £1,600 and £1,700; present rate ahout £2,000; roomy shop; residence sub-let; 21 years' lease; to effect a speedy transfer vendor will consider a reasonable offer.

3.—LONDON, W.—Main shopping thoroughfare; ready-money Retail, Presoribing and Dispensing Business; established 1831, and held by vendor 35 years; returns £30 to £40 per week, plus £10 from N.H.I.; rent £70, including residence; lease 14 years; price £1,200.

years; price £1,200.

4.—POPULAR HEALTH RESORT (one hour from Town).—
Modern Pharmacy; position unique; returns, under Manager, £7,000, increasing; large, well-fitted shop; electric light; price £4.800

5.—INLAND HEALTH RESORT.—Old-established Retail and Dispensing Business; returns between £2,200 and £2,400, increasing; fair profits obtained; well fitted and fully stocked; new lease will be granted; price to he agreed.
6.—INLAND HEALTH RESORT.—Good-class Business, Retail and Dispensing; returns £1,000, formerly £3,000; well-fitted shop and residence; stock and fixtures estimated at £800; price £950; death cause of sale.
7.—SOUTH COAST.—For Disposal, Wholesale Business, returning about £500 monthly; modern factory, two floors; electric light; moderate rental; held on lease; further details on application. 5.-INLAND HEALTH RESORT.-Old-established Retail and

8.—BANKS OF THE UPPER THAMES.—Old-established Business, situate in the centre of main thoroughfare of charming residential town; returns, present rate, £4,500 per annum; gross profit about one-third; well-fitted shop; lease 21 years; rent £50 per annum; price £3,500.

9.—SOUTHERN WATERING PLACE.—Select Retail and Dispensing Business, situate in one of the leading shopping thoroughfares; gross receipts exceed £4,500, with scope for development; well-fitted shop and large stock; comfortable residence; lease 21 years; price to be agreed.

years; price to be agreed.

10.—GREAT WESTERN MAIN LINE.—Old-established Dispensing Business, embracing scleet Proprietary trade; vendor giving up the Retail; returns £3,600, at full prices; price, to include freehold property, £5,500.

11.—WARWICKSHIRE.—Old-established Wholesale and Retail Business; returns exceed £8,000 per annum, at good profits; long lease; low rental; further details on application.

12.—NORTH STAFFS.—General Retail Business; returns exceed £2,500 per annum; books open to investigation; double-fronted shop; low rent; new lease can be obtained; price about £1,500.

13.—SCOTLAND.—General Retail Business; returns £20 weekly, at fair prices; modern fitted shop; convenient residence; price, including premises, £1,200.

14.—NORTHAMPTONSTHRE.—Brisk Retail Business, situate in husy market town; returns at the rate of £3,000 per annum; net profit 25%; price £2,500.

VALUATIONS

Essre. C. & Ce., desire to emphasise the necessity of a periodical Statement of Account, by which means alone Front, the value of Businessa, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is aften emitted and eventually becomes the cause of confusion and loce.

Messra. G. & Co. are prepared to undertake these esenctial duties, and will make appealal Terms for such corriges.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.

VALUERS & TRANSFER AGENTS

35 Jewry Street, Fenchurch Street, E.C.3.

Telephone: 1809 CENTRAL.

NORFOLK BROADS.—Unopposed village business for quiet disposal. Returns average £9 10s. weekly. Plenty of scope, low rent, option of lease. Convenient house and very large garden. Price £300.

BUSINESSES WANTED.

We have genuine cash buyers on our books prepared to take over immediately businesses in the following localities:

LONDON (good-class suburb).-Prices from £600 to £3,000.

HOME COUNTIES (large or small towns) .- Prices from £500 to £2,500.

SOUTH, S.E., or S.W. COAST .- Prices, £800 to

EASTERN COUNTIES .- Prices, £600 to £2,000.

SOUTH MIDLANDS OR MIDLANDS.—Prices, £500 to £3,000.

SOUTH-WEST AND WESTERN COUNTIES .-Prices, £800 to £2,500.

Intending vendors are cordially invited to correspond. Private register kept. Quick sales guaranteed.

ESTABLISHED 1870.

PRIZE COURT SALE.

IN PRIZE.

By ORDER and for ACCOUNT of the MARSHAL of the ADMIRALTY and PRIZE COURT.

To be SOLD by PUBLIC TENDER.

To be SOLD by PUBLIC TENDER.

4 Brls. Boracic Acid Xtls., lying North Shields, ex s.s. Balto.

3 Brls. Boracic Acid Ntls., lying Bristol, ex Glydenpris.

6 Brls. Tartario Acid Ntls., lying Bristol, ex Glydenpris.

5 Cases Tartaric Acid, lying Leith, ex Stromboli.

4 Cases Tungsio Acid Pdr., lying London, ex J. G. M'Cullough.

14 Brls. Borax Crystals, lying Bristol, ex Glydenpris.

29 Brls. Borax Crystals, lying Bristol, ex Glydenpris.

3 Brls. Borax Crystals, lying Bristol, ex Glydenpris.

6 Brls. Borax Crystals, lying Sunderland, ex Carlsholm.

3 Brls. Borax Crystals, lying North Shields, ex Balto.

2 Bags Copper Ore, lying Greenock, ex San Francisco.

8 Cases Graphite in Oil, lying North Shields, ex Balto.

3 Brls. Acetate of Lead, lying Bristol, ex Glydenpris.

52 Brls. Manganese Resinate, lying Bristol, ex Glydenpris.

52 Bags Mineral White, lying Hull, ex Storrebelt.

1 Brl. Paranitraniline, lying Bristol, ex Glydenpris.

14 Bags Sulphur, lying Bristol, ex Glydenpris.

14 Bags Sulphur, lying Bristol, ex Glydenpris.

1681 Bags

69 Bags

107 Bags

414 Bags Wine Lees, lying London, ex Dagmar.

66 Bags Tartar and Wine Lees, lying London, ex Dagmar.

66 Bags Tartar and Wine Lees, lying London, ex Dagmar.

4 Brls. Sodium Chrome Alum Liquid. lying London, ex Gorredijk.

Tenders, in envelopes marked "Tender for Chemicals" and

Tenders, in envelopes marked "Tender for Chemicals," and addressed to THE ADMIRALTY MARSHAL, Royal Courts of Justice, London, W.C. 2, must be received not later than NOON on TUESDAY, 6th JULY, 1920.

All further particulars may be had on application to Selling Brokers, D. W. GREENHOUGH & SON, 21 Mineing Lane, London,

PARSON C. BAKER Ph C., M.P.S., 4 Cyprus Road, Church End, N. 3 Wm. ROOKE ROBERTS, M.F.S., F.S.M.C.

174 Viotoria Street, S.W. 1. Tel.: Victoria 27.

Valuers for Purchase, Sale, Probate, Income Tax, Balance Sheet, &c.

Recommended by The British Drug Houses, Ltd., Messrs. Meggeson Ltd., Messrs. Barclay & Sons, Ltd., and many other leading Wholesale Houses. Valuers to the Association of Manufacturing Chemists.

SOUTHALLBROS. & BARCLAY, Ltd.

(Valuation and Transfer Dept.) Special Terms for Probate and Trading Accounts, Income Tax, etc.

For particulars apply--19, 20, 21 LOWER PRIORY, BIRMINGHAM.

HOS. TOMLINSON & S

OHEMISTS' VALUERS, TRANSFER AGENTS, AND EXPERT STOCKTAKERS.

48a MARKET STREET, MANCHESTER. ESTABLISHED OVER HALF A CENTURY. Telegraphic Address: "Tomtom."

BUSINESSES WANTED'

8s, for 50 words or less; 6d, for every additional 10 words or less, propeld.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-

OUTH or West of England.—Pharmacy wanted, where energy and effort would be rewarded with substantial increase in turnover; state in first letter usual particulars, also if house be available; all replies treated in strictest confidence. Apply 105/11, Office of this Paper.

A DVERTISER wishes to acquire a well-established, good-class Business in Eaglish Lake District or vicinity; cash purchase up to 23,000. Full particulars, in strictest confidence, to "Genuine" (106/38), Office of this Paper.

WANTED, good-class Business, doing £3,000-£4,000, in London or Homo County; or would consider partnership in larger concern. Reply, in confidence, to "Chemist" (106/40), Office of this Paper.

WANTED, Pharmacy or Drug Stores, situated in or within easy reach of Birmingham; all replies treated in strictest confidence. "G.," 91 Wolverhampton Road, Heath Town, Staffs.

AGENCIES.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-

TNDIAN firm, having branches in Bombay, Karachi, and agencies in Labore, Delhi, Madras, and Calcutta, willing to accept sole agencies of Patent Medicines, Groceries, Fance Gods, Novelties, and Toilet Requisites; best references; excellent sale organisation in India; commission basis for new lines, and will buy advertised lines; proprietor in London temporarily. Write H., c/o James Smith & Partners, Ltd., 36 Camounile Street, E.O. 3.

FIRM, with established connection for own specialities, representatives working country from S. Wales to Scotland, erropen to arrange with London or Southern firm to sell each other's goods; Representative wanted for Ireland. Address 23/19M. Office of this Paper.

PEPRESENTATIVE, eight years' personal connection throughful the control of the co

REQUIRED, an Agent on commission, calling on Chemists, to introduce paying side-line in the provinces; liberal commission to a good man. Apply, by letter, stating ground covered. W. P. Humfrey & Co., Northumberland Grove, Tottenham, N. 17.

PARTNERSHIPS,

OFFICE, Warehouse, and Factory.—Advertiser (Chemist) will give immediate occupation of premises as above, and provide same rent free for long term in return for partnership or responsible position in sound firm, or would amalgamate with other business to further mutual interests. Write, in strict confidence, "Premises" (106/25), Office of this Paper.

PARTNER WANTED, TRAVELLER OR SLEEPING, with \$2500.2600; Wholesale; splendid connection; progressive; wants capital; every guarantees. Apply 102/32, Office of this Paper.

TO MERCHANTS, SHIPPERS, AGENTS.—Energotic business mau with over 20 years' experience India, Burma, and Ceylon (Drugs, Chemicals, Druggists' Sundries), seeks interest in business offering scope for expansion; can invest up to £5,000; highest references. Write P.C.B. 77/16, Office of this Paper.

BUSINESSES FOR DISPOSAL.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

BIRMINGHAM.—Good opportunity to acquire growing Business in working-class neighbourhood; present returns over \$21,000, and rapidly incressing; N.H.I., good working stock; price £750. Apply 106/24, Office of this Paper.

CHESHIRE, industrial district.—Modern Shop; lease; takings between £3,000 and £4,000 per annum; price £2,200; bounded inquirers only answered. 107/35, Office of this Paper.

DURHAM.—Splendidly fitted and well-stocked Pharmacy; returns increasing; large corner shop and warehouse; property, stock, ctc., £2,250. Apply Richard Crow, F.A.I., Auctioneer and Valuer, Vine Place, Suuderlaud.

KENT.—Village Pharmacy; modernised house; small garden, in fruit-bop district; easily worked business and house; price for frechold property, Retail and Wholesale connection, and stock, £2,000 cash; furniture might be sold; early possessiou; those who cannot live in the country please save stamps. "Italy" (107/16), Office of this Paper.

LANCASHIRE (Seaside).—High class Toilet and Perfumery; returns £3,000; fully stocked; up-to-date fittings; scope for development; situate main business thoroughfare; held on lease. Apply 106/23, Office of this Paper.

CNDON.—A well-established Wholesale Business, trading in Drngs, Fine Chemicals, and Specialities, is offered for Sele; a splendid opportunity to acquire a sound and lasting connection in Homo and Export trade; every facility for inspection given to bona-fide purchasers. Apply 108/32, Office of this Paper.

MANCHESTER.—Drug and Toilet Store, in residential suburb, taking £22 weekly; qualified proprietor could double; scope for Optics, Photography, N.H.I.; excellent fittings; rent £30; no living accommodation available; house part let off to good tenant, who cannot be evicted; shop, sitting-room, two stockrooms, and cellar available; £650. Shirley, 19 Northesk Street, Stone, Staffs.

MIDLANDS.—Old-established Business for Sale; agricultural district; good house and garden attached; rent £40; let off, £36; no N.H.I., Optics, or Photography; neglected on account of other engagement; well stocked and handsomely fitted; price £600; scope for Dentistry. Apply "Ajax" (109/17), Office of this Paper, enclosing stamped addressed envelope for reply.

OUTH OF SCOTLAND.—Progressive village Pharmacy; unopposed; turnover 220 weekly, increasing; handsomely fitted sbop, single from; easily worked; good dwelling-house; rent £30; vendor's own property; freehold, which can be purchased; price, including business, £1,200. Apply 100/3, Office of this Paper.

STAFFORDSHIRE (near Walsall and Birmingham).—Nice-paying, old-established Chemist's Cash Busiuess; double-fronted shop; 5-roomed house; ample cellarage, etc., with N.H.I. and profitable side-lines; excellent Prescribing connection, with large and successful range own Proprietaries; low overhead charges; net yearly profit about £365; capable of increase; to an active Pharmacist with Prescribing ability this is a comfortable proposition; price £500; principals only; bankers' references. Write 107/10, Office of this Paper.

BRANCH Business, not open at present full time, in mining village; beautifully situated in Midlands; 3.000 population, increasing; well stocked; returns half-year about £800; could easily do £2,000 per annum; about £400 cash. 107/36, Office of this Paper.

RETURNS £8,000 upwards.—W.R. Yorks; good-class Brug Store, with Photography and Tobacco; double-fronted (divided); central premises; freehold can be purchased; valuation terms. 14/18H, Office of this Paper.

SPLENDID Chance for Chemist.—Toilet Requisite, Perfumery, etc., Business; unrivalled position busy S.W. suburb; 70,000 people pass daily; lock-up shop; rent £50; lease 19 years; turnover last year £1,200; excellent profits; price £350 for valuable lease and goodwill; stock at value. Apply Aubrey & Co., 28 Watling Street, London, E.C. 4.

MANUFACTURING Business; old established; proven valuable Formulas, Proprietary Medicines, Toilet Preparations, Headache Powders, Packed Pills, Spa-Salts, Ice Cream, Custard Powders, Lozeuge Tablets; sugar allotment tou mouthly; connection Chemists, Grocers, Confectioners, England, Wales; capable of great extension; disposal ill-health; modern living accommodation; beautifully situated; lease 45 years; business and premises £5.000; banker's reference required. "Prosperous" (104/23), Office of this Paper.

FOR SALE,

Se, for 50 words or less; Sd, for every additional, 10 words or less, prepaid.

The Advertiser may, it preferred, never replies addressed to this Othee and forwarded on payment of an additional charge of 18.

BARGAIN.—Wall Case (upper and lower), Sponge Case centre, with Showcases sides, marble top, and Dispensing Screen and Showcases combined; Perfune Case and Desk coombined; all mirror-backed and plate-glass doors; quantity Shelving, and Cornice, Cupbourds, etc.; all good order and malogany; rare chance beginner; worth £125 to-day; accept £80. Hawthorn Hill, 150 Northam Road, Southampton.

COUNTER Showcase, mahogany, velvet-lined; flat plate-glass top; 36" × 17½" × 7½"; splendid condition. Offers, Davies, 390 High Street, Mnnor Park, E.

FOR Sale, the Bottles, Jars, Drawers, Show and Counter Cases, and all the Fittings of a Chemist's shop. Stoakes, Chemist, Hull.

NOR Sale, Floor Showcase, lower part 3 ft. square, with lift-up dome top, height over all 4 ft. 6 in., mahogany, glass four sides and top; suitable for sponge, with upper part for other Toilet goods; two sides require re-glazing. Offers to "Deva" (107/260), Office of this Paper.

POR Sale, fine Spanish Mahogauy Fixtures; 15-ft. Counter, panel front and desk; 14-ft. Nest of Drawers, with glass knobs, in 2 sections; Lockers, Cupboards, Shelves, Mirrors; 6 dozen 2-lb. and 50-oz. N.M. and W.M. Rounds; 2 large, handsome Specie Jars; view any time by appointment. T. M. Taylor, 13 Queen's Terrace, St. John's Wood, N.W. 8.

POR Sale, 6 gross packets Louis Tea Tablets; 6 gross packets Louis Coffee Tablets; any reasonable offer for whole or part. Kemp & Elmett, Chemists, Lincoln.

NATIONAL CASH REGISTER; late model; keys \dd. to £3, check stops, self-adding, booking, printing, etc.; lock-up drawer. Full particulars from "X.," Henshaw, Welsh Bridge, Frankwell, Shrewsbury.

PILL Plant, small, power, clean; consists of Werner Muss Mixer, Piping Press, Pill-cutting Machine, and Coating Pan; Gas-heated Copper Pan, water-jacketed, on stand, by Fletcher Russell, £20; Copper Coil, £5. Apply P.C.B. 80/21, Office of this Paper.

SITUATIONS OPEN.

RETAIL.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

A BERYSTWYTH.—Junior Assistant for season trade; Light Retail, Dispensing, and Photography. Reply, giving full particulars, references, and salary required (outdoors) to Ellis, Pharmaceutical Chemist, Aberystwyth.

BARRY DOCK (Glam.).—Junior Assistant (male), unqualified, required for Light Retail, Dispensing, Photographic. Apply, stating full particulars as to experience, salary required, and if possible enclose photo, to W. T. Hicks & Co., 28 Duke Street, Cardiff.

BIRMINGHAM.—Smart Junior Assistant for quick trade; must be a good Dispenser. Please give usual particulars to Atkinson, Chemist, Six Ways, Birmingham.

BLACKPOOL.—Junior Assistant (male), at onee, for the season. Apply, giving full particulars, references, and salary required (outdoors), to C. R. Gaulter, 41 Devonshire Road. Blackpool.

CROMER.—Junior Assistant required, immediately, until the please give particulars of experience and state salary required (outdoors). Honre, Chemist, Cromer.

CUMBERLAND.—Qualified Chemist required for Retail Department; Agricultural knowledge preferred; state full particulars as to experience, age, whether married or single. Apply Wilson & Kitchin, Ltd., Wholesale and Retail Chemists, Whitehaven.

URHAM.—Junior or Improver, young and energetic, for Dispensing and quick Cash business; good Salesman and Windowdresser; send full particulars, in first letter, of age, height, experience, salnry required (outdoors), references, photo, if possible. Rowland Hill, Pharmacist, Spenuymoor.

FRINTON-ON-SEA.—Assistant wanted till mid-September for high-class business; experienced Dispenser and accustomed to Photographic sales; short hours; no Sunday duty; outdoors; give full particulars. W. S. Collitt, o/o Mr. C. Bayley, Chemist, Frintou-on-Sea.

LIVERPOOL.—Qualified Assistant; quick Salesman; used to Insurance Dispensing; working-class district; state age, references, experience, and salary required. Hopwoods Ltd., 345 Scotland Road, Liverpool.

LONDON.—A qualified man as Branch Manager; outdoors; must be capable, industrious, and energetic. State full particulars, previous experience, salary required, etc., to P.C.B. 80/14, Office of this Paper.

ONDON, W.—Wanted, qualified Manager (outdoors) for Counter, Dispeusing, and Stock, accustomed to Store trade, with a knowledge of Photography; state age, experience, and salary required. Apply 108/7, Office of this Paper.

LONDON, S.W.—Wanted, reliable, unqualified Assistant, well up in Dispensing; good Counterman; must be of good appearance and address, and energetic; comfortable berth; easy hours, Full particulars and salary required (outdoors) to 107/15, Office of this Paper.

MIDLANDS.—Young lady Assistant required; permanency; state age, salary required, and when at liberty. "C." (105/221), Office of this Paper.

NEWQUAY, CORNWALL.—Assistant required for high-class Dispensing and Retail business; must have good references. Apply, giving all particulars, and stating salary required and when disengaged, to Alfred Bond.

OUTHPORT.—Junior Assistant wanted (at once) for good-class business. Applicants must give full details in first letter to E. L. Leu, Chemist, Southport.

TEIGNMOUTH.—Unqualified Assistant wanted (outdoors) for good-class Dispensing and Light Retail; no N.H.I. or Photographios. Full particulars of experience, age, and salary required, to H. Dring, Chemist, Teignmouth.

WEST END.—Qualified Assistant, accustomed to high-class Retail and Dispensing, required for the whole month of August. Full particulars, terms, etc., to "Deva" (107/26), Office of this Paper.

WEST RIDING.—Wauted, a capable Clerk (male or female), accustomed to the Drug trade, with knowledge of Shorthand, Typiug, and Bookkeeping, to take charge of office. Apply, stating age, experience, and salary required, to 109/5, Office of this Paper.

A SSISTANT wanted, with good experience; age about 25; single; personal interview; replies not answered in two days declined. Pull particulars to Louis E. Wixey, Nailsworth, Gloucestershire.

A SSISTANT wanted for high-class Counter and Dispensing trade; must be competent and reliable; free house. Please give full particulars, with photo (if possible) and salary required, Wilson, Chemist, Crowborough, Sussex.

I MMEDIATELY.—Qualified gentleman as Dispenser; must have had good experience and undeniable references. Apply, by letter in first instance, to Manager, Heppell's, Hotel Cecil Buildings, Strand.

JUNIOR Assistant; quick and accurate Dispenser, good Counterman, and used to first-class Family Retail trade; near London; short hours. Apply, with photo, salary required, and full particulars, A. W. Hall, Chemist, Pinner, Middlesex.

JUNIOR Assistant (male) required, unqualified, accustomed to Quick Cash Retail and N.H.J. Dispensing; Thursday half-holiday; outdoors. Apply, with full particulars and salary required, to J. Patterson, 52 Hford Lane, Hford, Essex.

JUNIOR Assistaut, capable, with knowledge of Photography and Wiudow-dressing. 108/8, Office of this Paper.

JUNIOR Assistant wanted for Brisk Cash Business and N.H.I. Dispensing; reasonable hours; salary £3 10s. weekly. State experieuce and when at liberty, Briggs, Chemist, 585 Lea Bridge Road, Leyton.

ADY Clerk wanted, with experience in Drug trade and necustomed to double-entry Bookkeeping. Apply to the Manager, Savory & Moore Ltd., Lancaster Gate, Bayswater Road, W. 2.

LADY (Junior) wanted for Counter; state experience and salary required. W. W. Adams, 36 Cape Hill, Smethwick.

LADY Assistant (Minor), to take charge country branch near Sheffield; easy hours; light duties; please state age, salary required, etc. Apply 108/30, Office of this Paper.

L OCUM, qualified, young, lady or gentleman, for August, early September (about 5 weeks). Full particulars, please (age, experience, salary outdoors, 'references), with photograph, to Wain, Pharmaeist, Ripley, near Derby.

I OCUM, qualified, for two weeks, July 3rd to 17th; outdoors; good-class Retail and Dispensing, with Photography; assistant kept. Give particulars, with references and terms, to Charles Gilling, Chemist, Sunningdale, Berks.

L OCUM.—Unqualified Assistant for small country town; on month; immediately. Apply, with full particulars and salary required, to Mann, Pharmacist, West Street, Wigton, Cumberland.

OCUM, experienced Dispenser, required for 16 days in August.

Reply, with terms and references, to Atkins & Son, Chemists, Satisbury.

OCUM-TENENS Dispenser (Minor or Hall qualifications) required from July 5th to July 19th inclusive; luuch, tea, and supper is provided when in attendance at 5 evening Clinics from 5 o'clock, and 2 afternoon Clinics from 1 o'clock, Apply to the Secretary's Office (stating salary required), London Lock Hospital, 283 Harrow Road, W.9.

MANAGER (qualified) required for Lancashire industrial town business; full control and good salary for suitable man, and a comfortable permanency could be anticipated; all unqualified assistance required is already on the premises; General Mixed trade. Apply, stating experience, and also salary required, t Thos. Tomlinson & Son, 45a Market Street, Manchester.

PARKE'S Drug Stores, Limited, require a Qualified Man imme diately; progressive wage for progressive man; applicant must have good London experience; knowledge of Photography and Optics an advantage. Apply, by letter only, stating age, height, and experience, to 65 Harmood Street, Kentish Town, N.W. 1

PARKE'S Drug Stores, Limited, have a vacancy for an Unqualified Assistant; applicants must be progressive, energetic, and have a knowledge of Photography; progressive salary given to the right man. Apply by letter, giving full details as to age, height, and experience, to 65 Harmood Street, Kentsh Town, N.W. 1.

QUALIFIED Manager required for July 1st; single preferred, state age and salary required. "H. L." (105/22), Office of this Phner.

QUALIFIED Chemist, about 25, as Manager for Branch in gressive position for suitable man. Apply, stating salary, experience, etc., 107/13, Office of this Paper.

QUALIFIED Dispenser required for West-End; outdoors; excellent prospect for good man. Apply Lewis & Burrows, Ltd. 146 Holborn Bars, E.C.

QUALIFIED Manager wanted immediately; London experienc necessary; must be energetic and progressive; salary £610s. and commission. Apply, stating age and full experience, to "Galen" (29/10P), Office of this Paper.

 $R^{\rm EQUIRED}$, immediately, fully qualified lady Dispenser and Bookkeeper for country practice on East Coast. Apply, stating salary required, 104/20, Office of this Paper.

S. F. GOSS, LTD., require a first-class Assistant, unqualified of for Counter and Dispensing. Apply Frank B. Arnold, General Manager, 460 Oxford Street, W. 1.

UNQUALIFIED Assistants wanted for S.W. and N.W. districts of London. Apply by letter, stating age, experience, and salary required, to "Experienta" (29/100P), Office of this Paper.

WANTED, for Branch Village Shop, scaside, West of England, lady Pharmacist, to take sole charge; no heavy trade; quiet business. Apply, stating salary requared, 106/29, Office of this Paper.

WANTED, young lady, with knowledge of country Chemist's business preferred, willing to join in the home and business of widow; state salary and full particulars; companionsh p desired. Apply 106/39, Office of this Paper.

WANTED, Junior, part time; 4 afternoons a week; steady "X. Y. Z." (99/12), Office of this Paper.

WANTED, Lady Dispenser and Bookkeeper for Doctor's Surgery; rooms provided. Apply, giving full particulars of age salary required, and references, Drs. Purves and Godfrey Lowe, Cornhill, Lincoln.

WANTED, in the West Riding of Yorkshire, Chemist (not necessarily qualified); lady preferred; used to superintending female labour. Apply, giving experience, salary required, etc., to 13/13G, Office of this Paper.

WANTED, by a Veterinary Surgeon, Dispenser and Bookkeeper; single; live out; references required State terms to 109/7, Office of this Paper.

WHOLESALE.

A DVERTISING Manager required by firm of Manufacturing Chemists making an important Invalid Food (nationally advertised) and successful Pharmaceutical Preparations; position offers great soope and excellent prospects; knowledge of Pharmaceutical business, Medical advertising, experience in design of display material, copy writing, public Press advertising, and organising ability are the desirable qualifications for the post; letters of application should be in applicant's own handwriting; giving fullest particulars of education and experience; age and commencing salary required should be stated. Apply 45/4W, Office of this Paper.

CHEMICALS.—London Merchants have vacancy for Manager of Ohemical Department; excellent opening for one with experience in merchanting Chemicals, as well as good knowledge of first-class sources of supply, and who can introduce fresh business, besides developing existing connections on a profit-sharing basis. Write, full particulars, experience, age, and remuneration required, to "Solidity," o/o J. W. Vickers & Co., Ltd., 5 Nicholas Lage, E.O. 4.

CLERK, accustomed to pricing and capable of taking charge of invoice department, for Head Office of Manufacturing Chemists in Scotland; state age, salary, and full particulars. Apply 105/25, Office of this Puper.

DRUGGISTS' SUNDRIES.—Wanted, by well-known firm, with established connection in Lancs, Yorks, Durham, and Derbyshire, live young Traveller; previous Travelling experience essential; good salary and expenses to the right man. Apply 35/198, Office of this Paper.

DRY-COUNTERMEN required by London Wholesale Export Druggists; must be experienced. Write, stating age, expericace, and wages required, to 3/34B, Office of this Paper.

EXPORT LONDON DRUGGISTS.—Gentleman, about 30, experienced in Office Management, capable of controlling junior staff of 12 or 15: knowledge of Shipping Insurance, Correspondence, etc.; good Accountant indispensable; accustomed to interviewing callers; excellent salary and prospects for energetic man with ambition. Write, full past experience and salary expected, to E.709, care Deacons', Leadenhall Street, E.C. 3.

HOREWOMAN wauted; must be good disciplinarian and possess practical knowledge of packing Chemists' Counter Goods and Sundries. Write, stating experience, age, and wages required (one who has served the Retail Counter trade would not be objected to), Raybould Whitehouse & Co., Ltd.; Manufacturing Chemists, Dudley, Worc.

HOWARDS & SONS, Ltd., Ilford, require an Analytical Chemist; only B.Sc., F.I.C., or A.I.C. need apply. Applicants should preferably have had experience of Aualytical work with a Public Analyst.

L ABORATORY Manager required by London Wholesale Druggists. Apply, with full particulars as to experience, etc., to 5/17C, Office of this Paper.

LIVE Representatives, on liberal commission, wanted for Midlands and Eastern Counties by old-established Perfumery house. Apply 29/9P, Office of this Paper.

Apply, in confidence, meutioning salary desired, experience, age, cto., 105/36. Office of this Paper.

Male Assistant for invoice and statistical department of London Manufacturing Chemists; age about 20; progressive post; only those accurate at figures, and with good knowledge of the trade need apply, stating full particulars and salary required. Apply 14/15H, Office of this Paper.

MESSRS. SUTCLIFFE & BINGHAM, LTD., Ogden Street, Cornbrook, Manchester, are prepared to appoint Representatives for sale of their well-known "Khovah Health Salts" amongst Chemists and Drug Stores; large and foreble advertising eampaign now commencing; terms, oounmission only; reply quickly. State ground covered, how often, and other Agencies held.

OFFICE.—A firm of Wholesale Manufacturing Chemists, within 20 miles south of London, have a vacancy in their office for a gentleman with good general knowledge of the trade; qualification not essential. Write full particulars of age, experience, and salary required to 3/32B, Office of this Paper.

DERFUMERY Laboratory Assistant required; young man (non-technical) for this work, preference given to one with slight experience; this is not necessary if active and willing. Apply to "B. W." (13/156), Office of this Paper, stating age, experience, and wages required.

QUALIFIED Assistant for Poison Department of provincial Wholesale house, and to assist in its management. Apply, stating age, salary required, and if any previous experience, to 55/20S. Office of this Paper.

REQUIRED, the services of competent Chemist, with thorough knowledge and practical experience in the manufacture of Toilet Articles and Perfumery of a high standard; a most excellent opportunity for the right person. Apply, stating age, salary required, and fullest details, to 108/26, Office of this Paper.

REPRESENTATIVE required, with established connection in Yorkshire and Sootland, also Midlands, to introduce as sidelines high-class Pharmaceutical Preparations, packed or in bulk, at cut prices, on commission basis. State experience and references, "Manufacturing Chemists," o/o Heath Bros., Blackfriars Street, Manchester.

ALES MANAGER.—Important London firm of Druggist Sundriesmen requires gentleman to act as Assistant to Sales Manager; preference given to applicant who has travelled and has had previous experience in similar work; must be able correspond on own initiative. Apply, stating full particulars, salary, etc., P.C.B. 79/25, Office of this Paper.

SALES DEPARTMENT,—Manufacturing Chemists require, age 24-30; qualification not essential; must be good Correspondent and have had good business training. Apply, by letter, to 3/33B, Office of this Paper.

TRAVELLER wanted for small progressive Manchester Druggist Sundry house; experience essential, and one with connections among Chemists Manohester and 50 miles' radius preferred; please give full particulars (iuconfidence) first letter. Apply 106/36, Office of this Paper.

WANTED, Travellers, with good connections amongst Chemists, etc., to take up well-advertised and popular side-line, on commission; please state ground covered and commission required. Apply the Renovo Manutacturing Co., 202 North Street, Leeds.

WANTED, an active and reliable man to assist in manufacture experience and salary required. Apply P.C.B. 80/15, Other of this Paper.

WANTED, West-End Pharmacy to carry stocks of a first-class Depilatory, at present commanding a good sale in the East; sole agency on liberal terms granted to suitable Chemist; makers prepared to advertise in suitable journals. Write to "C. M." (9/5E), Office of this Paper.

WANTED, Travellers calling on Chemists in all parts of England, Sootlaud, and Wales, to carry a high-class Medicinal Speciality, having an easy sule amongst Chemists, on a guaranteed 20 per cent. commission basis; small sample only; men who will sell can materially increase their income. Apply 100/7, Office of this Paper.

SITUATIONS OPEN.

(Colonial, Indian and Foreign.)

Calcutta.—Assistant, under 25, required for old-established Calcutta firm; qualified preferred, but not essential; experience in Retail trade and in accurate Dispensing of Prescriptions necessary; four years' agreement; salary first year Rs. 300, second year Rs. 325, third year Rs. 350, and fourth year Rs. 376 monthly; fares paid out and home. Apply, giving full particulars of experience, etc., to 21/51, Office of this Paper.

CAPE TOWN—Surgical Instruments.—Wanted, in Cape Town, South Africa, smart young man, trained in the Surgical Instrument trade; good Salesman and Truss-fitter, with some manufacturing experience, preferred; knowledge of Optics and Dental Goods an advantage; passage paid out; good prospects. Apply by letter only to 'L.," 14 Lafone Street, Tower Bridge, London, S.E. 1.

CTRAITS SETTLEMENTS.—Young Assistant, unmarried, with Chemist's qualification, a good knowledge of Optics desirable; four years' agreement; passage paid out and home; salary first year £490; second and third years £525, fourth year £560. Apply 140/34, Office of this Paper.

EXPORT.—London.—Wanted, to get into touch with a gentleman having experience and connection with Foreign and Colonial Buyers. Apply 1/101, Office of this Paper.

SITUATIONS WANTED.

[HOME.]

RETAIL.

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may, if preferred, have replies addressed to this Office, and forwarded on payment of an additional charge of 1/..

A QUALIFIED Chemist desires any position of trust, Manager or Locum, early in July; held present position for 8½ years.

13 Coniger Road, Parson's Green, S.W. 6.

A QUALIFIED Chemist, 40, disengaged; Manager or Loomm; thoroughly competent; town, country, seaside experience; up-to-date Photography; entire satisfaction guaranteed. Apply 108/16, Office of this Paper.

A LADY, unqualified, age 23, seeks post; good Dispenser, Counter, and Stock; highly recommended; London or near suburbs preferred; please state particulars. Apply 108/34, Office of this Paper.

A YOUNG married Pnarmacist, with the best high-class and commercial experience, seeks a permanent position at a fair salary, with prospects. Pharmacist, Y.M.C.A., Dale End, Birmingham.

A DVERTISER (28) requires responsible position; thorough knowledge of Patent Medicines and Sundries; used to all buying, office routine, correspondence, and control of staff. Reply, stating salary offered, P.C.B. 80/18, Office of this Paper.

A ⁸ qualified Locum; permanency; Midlands, Birmingham preferred; references speak for themselves; good Manager. "Chemist," 229 Moseley Road, Birmingham.

A SSISTANT, Student-Associate, unqualified, 31, recently demobilised, desires post as Manager Drug Stores; free July 14th. Apply 106/22, Office of this Paper.

A SSISTANT, unqualified (35); married; good Retail, Dispensing, and Photographic experience; excellent references; North of England preferred. McKie, Locherbie House, Low Fell, Gateshead-on-Tyne

A SSISTANT, unqualified (32); 14 years' experience; competent, reliable; excellent references; disengaged. Usual particulars to Hughes, e/o Mrs. Brewster, Fore Hill, Ely, Cambs.

A SSISTANT, unqualified (27); married; 4 years apprentice, 3½ years' high-class Retail experience; Loudon or near preferred. Alford, 167 Nelson Road, Hornsey, N.

A SSISTANT, age 20; Dispensing; good Salesman; Photography and Manufacturing; permanent or Locum; whole or part time. P., 20 North Villas, Camden Square, N.W. 1.

A SSISTANT, unqualified, for Locum or permanency: London; all-round experience; disengaged shortly. "Radix," 72 Tremadoo Road, Clapham, S.W.

BRISTOL OR DISTRICT.—Unqua micd; age 32; married; 6 years Dispensing Assistant in one shep. Apply 105/12, Office of this Paper.

CAPABLE woman seeks re-engagement; highest references; general routine; assist Counter. Tasker, 14 Vineyard Terrace, Long Lane, Finchley, N. 2.

CLERICAL.—Evening work of any kind; posting up and accounts; terms moderate. "F. G." (118/31), Office of this Paper.

DISENGAGED; qualified; Manager, permanent or Locum; West End preferred; 25 years' London experience. "Chemist," 108b Elgin Avenue, W. 9.

Dispensing, Photographic; London or Home Counties. R. L. Quirk, "Kinross," College Road, Guildford.

DISENGAGED.—Locum or permanent; thoroughly experienced, competent; town or country; terms moderate. "Rhei," 239 Camberwell New Road, S.E. 5.

DISPENSER (lady) requires post, preferably with Doctor, 8 years' experience; Locum or permanency; free June 26. Apply 107/24, Office of this Paper.

DISPENSER (unqualified), age 23, experience 3 years civil, 31 in Army as such, now modical student in Edinburgh, requires receiving post as Junior Dispenser only during his vacation, July, August, and September. State terms, hours, to W. Stober, 28 Harlow Moor Drive, Harrogate.

EVENINGS, full or part time, or Locum; thoroughly capable; experienced Counter or Dispensing (5 years' Continental); terms underate; town or country. "Student," 30 Ebury Buildings, Victoria, S.W. 1.

IMPROVER requires situation; age 20; 2½ years present employer; seaside preferred. Replies to 104/26, Office of this Paper. (Will advertiser kindly send name and address to this office?)

JUNIOR (23); 7 years' experience; good Counterman, Dispenser; well up in Photography; salary £4; Loudon or Brighton and district preferred. Thompson, 72 Atheldene Road, S.W. 18

JUNIOR (lady) seeks situation in good Dispensing business; excellent Dispensing experience. Seymour, references and present address e/o Mr. Blakely, The George Street Pharmacy, Ryde, L.W.

ADY Dispenser, qualified, experienced, wants post, part or whole-time. Benson, 501 Hornsey Road, London, N. 19.

L ADY Dispenser (Hall) desires post; excellent testunonials; Hospital experience; Locum or permanency. Dispenser, 25 Clifton Hill, N.W. 8.

ADY Dispenser and Bookkeeper (unqualified) requires post with Doctor or Chemist. S., 52 Loraine Road, Holloway, N. 7.

ADY desires post; Hall qualification; 10 years' experience Retail and Dispensing; disengaged last week in August; Locum or permanency; Chemist. Doctor, or Institution. A. D. G., 81 Olive Road, Cricklewood, N.W. 2.

L ADX, young, requires post, Chemist; 3 yesrs' all-round experience; excellent knowledge Dispensing; W.C. district preferred. Apply 108/27, Office of this Paper.

OCUM; 46; experienced all branches; disengaged; highest references; take full charge; abstainer; moderate terms. "Pharmaeist," Post Office, Arnside, Westmoreland.

I OCUM, qualified, 30, disengaged; experienced; highest references. Apply 107/2, Office of this Paper.

L OCUM, experienced Pharmacist (34), can accept dates from July 12th; series of company shops, Lanes and/or Yorkshire, would suit; no objection to distance if suitable accommodation found. Parker, M.P.S., 25 B)derstone Fold, Rochdale.

Lordon and country experience; Photography; reliable; first-class references.

OCUM; qualified; 30 years' wide experience; August 9 to 21. Smith, c/o Desmonds, 104 Katherino Road, East Ham, E.

OCUM, unqualified, 27, thoroughly experienced, desires engagements July and August; take complete charge or assist; town or country. Please apply "Rhei, 186 Vauxhall Bridge Road, Westminster, S.W. 1.

OCUM, discurgoged, unqualified, age 32, wishes to book up engagements for holiday relief. R. F., Church Road, Newick.

LOCUM Tenens; middle-aged: all-round experience; disengaged June 26 to July 3, July 12 to August 7. "Locum Tenens, 56 Capel Street, Newport, Mon.

LOCUM; Leeds and district; booking forward; Retail and Dispensing; excellent references. "Chemist," Armley Fharmacy, 163 Armley Road, Leeds.

LOCUM, qualified; free June 28-July 10; excellent references and experience; state terms. Hudson, Brown, Chemist, Stockton Heath.

OCUM; qualified; middle-age; varied experience; active, energetic, but careful; any class business, long or short period. "Chemist," 68 Addison Street, Nottingham.

JOUM, 38, qualified, well experienced, disposing of business, wants engagements from now until end of September. Apply 108/18, Office of this Paper.

LOCUM, disengaged August and September; elderly; very active. Apply 109/14, Office of this Paper.

J OCUM, or permanency as Manager; qualified; 38; experienced, reliable and progressive; country town, seaside, or village; preferably view succession. "Patent" (109/4), Office of this Paper.

LOCUM; highest references; well recommended; town, West, and North Country experience. "Beta," 74 West Hill, East Putney, London, S.W. 15.

QUALIFIED; 35; Manager or Senior; London or suburbs preferred; good London experience; Locum (London) entertained from June 28th. "Manager," 22 Roxburgh Place, Newcastle-on-Tyne.

QUALIFIED, 23, desires permanency; good experience in highclass Dispensing and Counter work; disengaged; state salary offered. Crumpler, The Square, Warcham, Dorset.

QUALIFIED, 35, abstainer, experienced, smart, requires lucrative berth. Apply "Radix" (102/24), Office of this Paper.

RETIRED Chemist (52), qualified, seeks part-time situation in good-class business, or other occupation, W. B. B., 39 Fountain Street, Hull.

TEMPORARY Relief; qualified; all-round experience; first-class references. Apply 107/5, Office of this Paper.

S TOCKTAKING.—Do not get into a muddle; have your stock taken regularly; this is essential to your business and your success; reasonable terms; town or country; satisfaction guaranteed. Hyndman & Mersey, 12 Edgeley Road, London, S.W. 4.

UNQUALIFIED; 28; good Counterman; experienced Store trade and Dispensing. F. Field, 38 Alfretcn Street, London.

UNQUALIFIED, 25, married, requires permanency; Brighton or near; all-round experience. For further particulars apply 106/12. Office of this Paper.

WHOLESALE.

The Advertiser may, if preferred, have replies addressed to thus
Office, and forwarded on payment of an additional charge of 1/s.

A WELL-KNOWN Representative in the Midlands. South-West, and part South Wales is open to carry another line, or part expenses and commission basis; no Creams or Perfumery. J. H., "Pittsburgh," Wormholt Road, W. 12.

CLERK, single, seeks situation; good knowledge Drug trade: accurate calculator; energetic. Apply 107/19, Office of this Paper. AS Representative.—Gentleman, qualified Chemist and M.P.S., many years experience of road and excellent record, conversaat with routes and customers in West of England and Midlands, wishes to represent good Drug or other house, there or Eastern Counties; reliable and steady worker, with undeniable references. "Cresol" (108/29), Office of this Paper.

Poteman.—Capable Working Foreman requires situation; 30 years' experience; knowledge of medical language and signs, Patents, Photographic Goods, Bottles, Surgical Appliances; could keep stock or act, as Salesman. Watford, 59 Downham Road, Hackney, London.

RUIT Paste and Licorice Extract.—Maker seeks situatiou; good references. Apply 105/17, Office of this Paper.

GENTLEMAN, age 31, 15 years' experience with Retail Chemists and big Stores, requires position as Traveller or Agent with a firm of good standing, dealing in any section of the business. P.C.B. 79/27, Office of this Paper.

OZENGE and Capsule Maker, thoroughly experienced, seeks situation as Charge Hand. E. P., 29 Pemell's Place, Peckham, London.

PH.CH. (ex-officer), having sold own business, seeks responsible position; 20 years' experience Retail and on road, at home and on Continent; flucut French; Accountant's qualification; several years Secretary Ltd. Company; first-class references; well known in Londou; small capital if required. "Captain" (104/27), Office of this Paper.

PHARMACIST, having three or four days a week at his disposal, requires representation for good firm. Apply 108/6, Office of this Paper.

REPRESENTATIVE, calling upon Chemists and Hairdressers in the Eastern Counties, would like another good line. Reply 106/30, Office of this Paper.

UCCESSFUL Representative requires first-class house, Toilet Preparations, etc.; at present with high-class London house, covering N.W. England and Scotlaud. "D. O. S." (104/17), covering N.W. Eng Office of this Paper.

101LET Preparations, Perfumery, etc.—Advertiser, with long experience, desires position of Manager. "Otto" (P.C.B. 80/19), Office of this Paper.

TRAYELLER, qualified, open for engagement 1st July; any line in Drug trade; good connection; salary and expenses. Apply 107/8, Office of this Paper.

WORKS Manager, life experience, English and American, manufacturing Toilet Preparations, Toilet Soap, and Chemicals, desires change; age 37; 3 years' active war service; demobbed, physically fit; London or Greater London only. Apply 104/21, Office of this Paper.

YOUNG gentleman, educated, smart, desires position as Traveller: Fine Chemicals, Toilet, or Photographic; 3½ years Retail Pharmacy. Apply "Voyageur"..(105/16), Office of this Paper.

SITUATIONS WANTED.

(Colonial, Indian and Foreign.)

A GOOD Colonial position is sought for by a young married Pharmacist with the best high-class Retail experience; good references. Salary and prospects, "Pharmacist," Y.M.C.A., Dale End, Birmingham.

MISCELLANEOUS,

10s, for 60 words; is, for every additional 10 words or less.

MCADAM & TUCKNISS, Stock and Share Brokers, Bank Chambers, Blackheath, S.E. 5. Established 1898. Telephone: 81 Lee Green.—Shares for Sole (free of commission, subject): 150 Allenbury "B" 6% Pf. 16s. 7dd., 30 "C" 16s. 6d.; 100 W. J. Bush Pf., 57s. 6d.; 270 Evaus Lescher Pf., 15s. 6d.; 750 Farrow's Bank, 10s. paid. 8s. 7dd.; 100 Genatosan 8% Pf. 18s. 10dd., 1,000 × 1s. Ord. 1s. 10d.; 100 Idris "A" 6% Pf., 11s. 9d.; 300 Ilford 6% Pf., 15s. 7dd.; 75 Lewis & Burrows 6% Pf., 15s.; 95 Parkes Drug 6% Pf., 15s.—Wauted (subject): Allenbury; Camwal; 300 Evans Lescher Pf., 14s. 6d.; Wright Layman.—Bankers, London, County and Westminster.

A BOUT 450 lb; of Sweet Tips or Aromatic Cachous to dispose of, in boxes of 11 lb, each; also Envelopes for same; will take the low price of 5s, 6d. per lb. for the Cachous and 10s. 9d. per 1,000 for the printed Envelopes; sample sent on application to Keyser, 26 Derby Grove, Lenton Sauds, Nottingham.

POR SALE, 6 gross boxes (12 in box) Perfnmed Bath Tablets (2s. 6d. linc), 120s. gross; 65 gross ditto, unboxed, 8s. gross; 12 gross bottles Eau de Cologne Hair Cream, 60s. gross; 2 gross bottles Brilliantine, 60s. gross; will accept £100 to clear the lot, or nearest offer; also Crnshing Machine for Sale, price £4. Apply "Clearance" (106/250), Office of this Paper.

POR Sale, cheap, to clear, immediately, 10,000 Eau de Cologne Lavender Bottles (greeuish), 25,000 Aluminium Tubes, 50 gross Spriuklers, 200 6-litre Bottles. Apply P.C.B. 77/19, Office

POR SALE, two or three Mixing Machines; second-hand; perfect order; some suitable for mixing stiff pastes and others for powders or liquids. Further particulars on application to 35/17S, Office of this Paper.

NOR Sale, Phenazone, B.P. (one case of 50 kilos.), ex warehouse, London. What offers? P.C.B. 80/16, Office of this Paper.

NAPHTHALINE Balls, about 3 tens for immediate disposal in minimum lots of 2 cwt. @ 56s. per cwt.; cash with order; carriage paid. Hemmings, 2 Scylla Road, Peckham Ryc, S.E.

SAPON CASTILE, B.P., 4 cwt. in bars, and about 80 lb. in fine powder; good condition; what offers? Apply 109/1, Office of this Paper.

SHOP-FITTINGS, comprising Drug Fitting, 14 feet long, with glass-labelled drug drawers, stock oupboards, lockers, shelving, and poison oupboard; 12-feet mahogany and plate-glass Wall Case; 16-feet mahogany and plate-glass Serving Counter, with sliding doors, Dispensing Serven and Counter; and 6-feet Wall Showcase. Particulars on application, Philip Josephs & Sous, Ltd., 95 Old Street, Londou, E.C. 1.

TART. Acid; 5 ewt. for Sale; 3s. 8d. per lb., carriage forward; English make; best quality. Apply 100/400, Office of this

THREE Patent Filling Machines, by Roberts, for Sale; these Machines are suitable for filling thin and thick Oils, Liquid Metal Polish, Enamel, etc., and are in perfect working condition; prices on application. Apply 106/20, Office of this Paper.

200 GROSS White Flint Vials and Limes for immediate disposal; tall White Flint Vials, ½-0z, 13s., 1-0z. 15s., 2-0z. 18s.; 4-0z. White Flint Limes, 23s. 6d. per gross; special prices for whole or large quantities; samples 6d., post free; terms eash with order; bottles despatched per return; bankers, London City and Midland. Wanted, Guillotine. F. Ditchfield, 170 Glodwick

EXCHANGE COLUMN.

Twopence per word: Minimum 25.

FOR DISPOSAL.

O'BRIEN Staudard Check Till, $7\frac{1}{2}'' \times 10'' \times 18''$; takes $2\frac{1}{2}''$ paper; brand new; £6 10s. City Dental Depôt, 103 Newgate-Street, E.C.
SURPLUS Stock.—Shaving Sticks, 9 doz., Price's Regina quality; plaiu leatherette cases; 6s. doz., carriage paid; cash with order. Bing, Chemist, Canterbury.

DRUGS AND CHEMICALS.

FOR Sale, 3 lb. Mercury (pure), 12s.; 1 lb. Potassium lodide (pure), 10s. Apply 5/16C, Office of this Paper.

LANOLINE (Newbery's), in tubes, retail 1s.; 2 gross, £4: or 4½ gross (all offered), £8. "P.," 16 Julian's Road, Wimborne, Dorset.

OPTICAL AND PHOTOGRAPHIC.

LANCASTER'S 4-pl. Instantograph: telescopic Tripod; complete; 5 double dark-slides, good, first-class Euryscope; Iris Diaphregm; R.R. Lens, 7 × 5: Carrying Case; additional ½-pl. Lens. Mackenzie, Chemist, Alness.

WANTED.

DORMIOL, 50 %, 1 lb. or less. Dolbear & Goodall, 108 High Street, Oxford.

OL. Anthem. Ang., in any quantity; quote price. Hall, Chemist, *Broadway, Crouch End, London, N.8.

**WANTED, small Ball Mill. Quote lowest price and send full particulars to 15/146. Office of this Paper.

PHARMACEUTICAL Books wanted; eash offers on receipt. Gower, Bookseller, 41 Voltaire Road, Clapham.

WANTED, Steam-Jacketed Pan, in good condition; capacity 15 to 20 gallons. Apply 100/4, Office of this Paper.

OFFERS wanted of 20 tons Tartaric Acid Crystals and 8 tons Citric Acid for prompt shipment. Apply 5/31B, Office of this Paper.

DISPENSING Scales, like fig. 7 May Roberts' list; stamped, meet requirements Act; lowest price. Finlayson, Stockton-on-

WANTED, Radium Salt, pure or Residues, old Applicators, ctc. Apply Harrison Glew, Radium Laboratories, 156 Clapham Road, S.W. 9.

Koad, S. W. 9.

STUDENT, allotted to London College of Pharmacy, wishes to change with Student allotted to Exeter. Apply 107/9, Office of this Paper.

SANTONIN, Bismuth. Carb., Potassium Iodide. Quinines, Brownie and Folding Cameras; surplus stocks bought. Forryan, 75—Hinckley Road, Leicester.

PILL PLANT (power); Mass Mixer; Gela-tine Coating Machine, Hand Rounder, Set Pill Cutters, Piping Press and Dies, Write 5/18C, Office of this Paper.

SPECIAL OFFER

SUPERFINE COLD CREAM, in 5-lb. tins, net weight, 10/6 Carriage Paid. Cash with Order.

> THE CASSON CHEMICAL CO., LTD. 44a Westbourne Grove, London, W. 2.

500,000 CARTONS for SALE

Suitable for 2, 8 and 10-oz. Bottles.

Also quantity of these size Bottles, Corks, Rubber Stoppers, Discs, Packing Materials, Churns, Filling Machines, Acid Tanks, Iron Drums, etc.

What Offers to Clear?

Write "C. D. W.," Anderson's Advertising Agency, 14 King William Street, Strand, W.C. 2.

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BATHING HELMETS. WATER WINGS, &c.

THE LONDON RUBBER CO.

183 Aldersgate Street, LONDON, E.C. 1.

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DAVIES' SULPHUR TABLETS

A Springtime Speciality that finds a ready sale



"KOMPRESSENGE" (Regd. Brand.)

Your customers know the value of Sulphur Tablets in the Springtime.

Davies' Sulphur Tablets create a demand wherever they are displayed, because of their excellent appearance and finish.

They contain ingredients of the finest quality only, and present a valuable remedy in an exceedingly palatable form.

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We are in a position to execute orders for any quantity, and can guarantee early delivery.

Samples and prices will be sent by return of post on receipt of a request.

DAVIES, SONS & CO. (Derby)

Wholesale Druggists & Manufacturing Chemists,

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Phone: 331



Now is the Right Time for the Right Material

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FOREST LANE.

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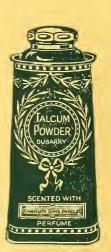
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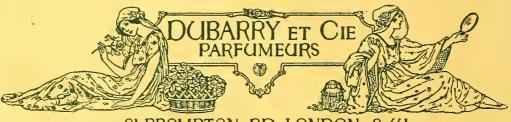
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